

EPA Jacket 71297-1

Vol.1

Receipt for Section 3

S: 775897

Regulatory Type: Product Registration - Section 3 Submission ☐ Yes ☒ No

Application Type: Notification Fee For ☒ Yes ☐ No

Company: 71287 AGRO FRESH INC. ☒

Risk Manager: Biologicals & Pollution Prevention Division, PM Team 81

Product #: 71287-1 Product Name: ETHYL BLOC

Me Too Section3: Me Too Product Name:

Application Date: 10-Mar-2005 ☒ OPP Rec'd Date: 11-Mar-2005 ☒

Front End Date: 11-Mar-2005 ☒ Risk Manager Send Date: 18-Mar-2005 ☒

Fast Track: ☐ New Ingredient ☐

Receipt Description:

Notification

MAR 16 2005 *Bpe*

Form A ☐ Signature Date: Form B ☐ Signature Date:

New Ingredient

Ingredient Date

Ingredient

Ingredient Date

Signature Date

[Print Letter](#)

[Enter More Information](#)

[Receipt Content](#)

150 yz

MAR 24 2005
cp

98-10
332
C. Forland

AIO
MAR 18 2005
sdh

Receipt for Section 3

S: 766612

Regulatory Type: Product Registration - Section 3

Application Type: Amendment

Company: 71297 AGRO FRESH INC.

Risk Manager: Biologicals & Pollution Prevention Division, PM Team 31

Product #: 71297-1 Product Name: ETHYLENE

Me Too Section3: Me Too Product Name:

Application Date: 06-Aug-2004 OPP Rec'd Date: 27-Aug-2004

Front End Date: 27-Aug-2004 Risk Manager Send Date: 27-Aug-2004

Fast Track: Inq:

Receipt Description:

AUG 30 2004

Receipt Content

301 FTT (1001)

766612 / 300
MA 17

AIO
SEP 3 2004
sdh
3

Tox QuikSheet

Product Name: EthylBloc EPA File Symbol/ Reg. #: 71297-1

A.I.: 1-Methyleclopentene Label Signal Word: Caution
Name and/or PC Code

Acute Toxicity

Tox Cat.

Optional Information*

		Test Substance	Date	Source (e.g. DER, BRAD)
Oral Toxicity/ Pathogenicity	IV	Circle One EP TGAI AI	SPR 10/10/04	RED
Dermal Toxicity/ Pathogenicity	III	EP TGAI AI		
Inhalation/ Pulmonary Toxicity	IV	EP TGAI AI		
Primary Dermal Irritation/ Pathogenicity	IV	EP TGAI AI		
Primary Eye Irritation/ Pathogenicity	III	EP TGAI AI		
Hypersensitivity	Circle One + -	EP TGAI AI	↓	↓
Tissue Culture (viruses only)		EP TGAI AI		

Comments:

Today's Date: 15 Sep 2004

Last Name, First Initial: Duggard, M

Ref 704

Receipt for Section 3

S: 753151

Regulatory Type: Product Registration - Section 3

Re-submission: ☐ Yes ☒ No

Print Letter

Application Type: Amendment

Enter More Information

Company: 71297 AGRO FRESH INC.

V

Risk Manager: Biologicals & Pollution Prevention Division, PM Team 91

Product #: 71297-1

Product Name: ETHYLEBLOC

Overridden:

Me Too

Me Too

Section3:

Product Name:

Application Date: 27-Jan-2004

ic

OPP Rec'd Date: 02-Feb-2004

ic

Front End Date: 04-Feb-2004

ic

Risk Manager Send Date: 04-Feb-2004

ic

Fast Track: ☐

Studies: ☐

New Ingredients: ☐

Receipt Description:

BPPD
FEB 07 2004

New Ingredient

Request Date

New Ingredient

Received Date

Form #

☐

Signature Date

Form #

☐

Signature Date

753151	300
n/a	12

ATW
JUL 14 2004
sdh

71297-7

८२६/०२

BPPD PRAT ACTION CODING FORM

PM 90: Janet Andersen

REGISTRANT/COMPANY NAME:

Fast Track: Yes ☐ No ☐

Reviewer CP

Assigned by LH

EPA REG./FILE SYMBOL

71297-1

[Note: If Fast Track, you may
need to change Reviewer's
Name in PRAT.]

ACTION CODE

305

(New A.I./EUP'S/Tolerances: Yes ☐ No ☐)

DATE OF APPLICATION

12/13/01

Failed 86-5

EPA RECEIVED DATE

12/14/01

BPPD RECEIVED DATE

12/27/01

SUBMISSION BARCODE

5609106

ASSIGNED IN PRAT: Yes ☒ No ☐

COMPLETED BY

LH

DATE

1.24.02

LOGGED IN BRATS: Yes ☒ No ☐

DATE

1/30/02

COMPLETED BY

CP

RAL RECEIVED

CP

(RAL initials)

DATE

1/30/02

FINAL ACTION

RESPONSE CODE:

38

RESPONSE DATE:

2/6/02

MOS:

(1) Cite All

(4) Not Applicable

(8) Selective

CRP

Restricted Use:

Manufacturing Use:

Exclusive Use:

Yes ☐

No ☐

Yes ☐

No ☐

Yes ☐

No ☐

Yes ☐

No ☐

PM 90: Janet Andersen

REVIEWER: _____
(ASSIGNED BY: _____)EPA REG./FILE SYMBOL 71297-1ACTION CODE 350

(NEW a.i./EUPs/Tolerances: Yes _____/No _____)

SUBMISSION BARCODE ~~0000~~ S590969DATE ON APPLICATION 11-15-00EPA RECEIVED DATE 11-20-00PM RECEIVED DATE 11-20-00ASSIGNED IN PRAT: YES X NO _____COMPLETED BY: sdh DATE: 1/17/01

~~~~~

due: 3/10/01

## FINAL ACTION

Response Code 1-19-01Response Date: 38

MOS: \_\_\_\_\_ (1) Cite-All

\_\_\_\_\_ (4) Not Applicable

\_\_\_\_\_ (8) Selective

CRP: Yes \_\_\_\_\_ No \_\_\_\_\_

Restricted Use: Yes \_\_\_\_\_ No \_\_\_\_\_

Manufacturing Use: Yes \_\_\_\_\_ No \_\_\_\_\_

Exclusive Use: Yes \_\_\_\_\_ No \_\_\_\_\_

Driss Return jacket to \_\_\_\_\_



MAR 10 2000

Stephen L. Longacre  
BioTechnologies For Horticulture, Inc.  
100 Independence Mall West  
Philadelphia, PA 19196-2399

Subject: Label Amendment: Decrease in the Content of Active Ingredient (1-Methylcyclopropene) from 0.43% to 0.14%, in the Label and the CSF.  
Product EthylBloc®. EPA Registration Number: 71297-1  
Your Submission of March 8, 2000

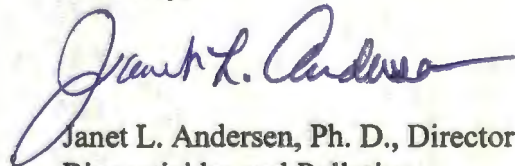
Dear Mr. Longacre

The amendment referred above submitted in connection with the registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended, is acceptable. A copy of the stamped label is enclosed for your records.

Submit five copies of the final printed labeling before you release this product for shipment.

If you have any questions regarding this action, please contact Driss Benmhend at (703) 308-9525.

Sincerely,



Janet L. Andersen, Ph. D., Director  
Biopesticides and Pollution  
Prevention Division (7511C)

Enclosures

(Container label first page only; insert label all pages)

**EthylBloc®**

EthylBloc® is a powder that, when mixed with a Mixing/Buffer solution or water, releases a gas to extend the life and usefulness of many fresh cut flowers, potted flowers, bedding, nursery and foliage plants. Plants are treated with this gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. This product is intended for use only on ornamental, non-food crops. Do not use outdoors or in other non-enclosed areas.

**Active Ingredient:** 1-Methylcyclopropene ..... 0.14%  
**Other Ingredients:** ..... 99.86%  
**Total:** ..... 100.00%

**ACCEPTED**  
MAR 10 2000

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 71297-1

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**Statement of Practical Treatment**

**IF IN EYES:** Flush with plenty of water. Call a physician if irritation persists.  
**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.  
**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

Refer to insert label for additional Precautionary Statements and Directions for Use.

**Manufactured by:** Biotechnologies for Horticulture, Inc.  
751 Thunderbolt Road  
Walterboro, SC 29488

For product information call toll-free (800) 323-3689

EPA Registration No.: 71297-1  
EPA Establishment No.: 71297-SC-001  
U.S. Patent No. 5,518,988

**Net Contents:** 1.34 oz. [38 grams (water soluble packet)], 2.6 oz. [75 grams (water soluble packet)] and 3.5 oz. [100 grams]

EthylBloc®  
Last label revision March 8, 2000  
Page 1 of 9



## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and mixers of this product must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Protective eyewear (goggles or face shield).
- Rubber gloves.
- As a general precaution when exposed to a gas, for activities in enclosed areas wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number-prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- Applicators and handlers must follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

EthylBloc® can extend the life and usefulness of many fresh cut flowers and potted flowers, bedding, nursery and foliage plants. It works by inhibiting the negative effects of ethylene and thus prevents or reduces premature flower death, leaf and/or flower fall, and leaf yellowing.

EthylBloc® is specifically designed to be used by all levels of the floral and nursery industries, including growers, shippers, wholesalers, bouquet

EthylBloc®

Last label revision March 8, 2000

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manufacturers, mail-order houses and retailers (such as florists, garden centers, nurseries and mass-market outlets). EthylBloc® is very easy to use with almost no labor costs.

EthylBloc® can be used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. It comes with two scoops for easy measuring and the proper Mixing/Buffer Solution. [Optional: EthylBloc® is in a water soluble package for easy use with the proper Buffer (mixing) solution.] The Mixing/Buffer Solution is used to facilitate gas release. [Optional] Users can substitute tap water for the Mixing/Buffer Solution but the gas release will not be as efficient. Contact the manufacturer for specific directions.] EthylBloc® is more effective under warm temperature conditions, 55° to 75°F, (13° to 24° C). Longer treatment times are required for plants held under temperatures below 55°F, (13° C).

## Flowers And Plants

EthylBloc® treatment benefits many flowers and plants such as:

Achillea, Aconitum, Agapanthus, Alchemilla, Allium, Alstroemeria, Alyssum, Aphelandra, Aquilegia, Asclepias, Astrantia, Asparagus Fern, Azalea, Begonia, Bouvardia, Brassia (Schefflera), Brodiaea (Triteleia), Calathea, Campanula, Carnation, Celosia, Centaurea, Chamaedorea, Chelone, Coleus, Cordyline, Cymbidium, Crocosmia (Montbretia), Daucus (Queen Annes Lace), Delphinium, Dendrobium, Dianthus, Dicentra, Dizygotheca, Doronicum, Echium, Eremurus, Eustoma (Lisianthus), Ficus, Freesia, Fuchsia, Geranium, Gladiolus, Godetia, Gypsophila, Hibiscus, Ilex (Holly), Impatiens, Ixia, Kalanchoe, Kniphofia, Lavatera, Lily, Lysimachia, Miniature Carnation, Monkshood, Pelargonium, Petunia, Philodendron, Phlox, Physostegia, Poinsettia, Radermachera, Rose, Rudbeckia, Salvia, Saponaria, Scabiosa, Silene, Snapdragon, Solidaster, Stock, Streptocarpus, Sweet William, Trachelium, Trollius, Veronica, Wax Flower, and Zygocactus.

To realize maximum benefits, plants should be treated whether or not they may have been previously treated with EthylBloc® or another anti-ethylene product. Shipments already treated with EthylBloc® do not have to be retreated, however, retreating is not harmful and can even be beneficial. Some species that would likely benefit from additional applications include those with more than one flower per stem (i.e. snapdragons, delphiniums, miniature carnations and alstroemeria) and flowers at different stages of development on the same plant (i.e. geraniums, impatiens, and azaleas).

### TREATMENT INSTRUCTIONS

1. Calculate the treatment volume by measuring the length, width and height of the treatment area in feet or meters. Multiply these three numbers

EthylBloc®

Last label revision March 8, 2000

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together to obtain the volume of the room/area in cubic feet or cubic meters. For example, if a room is 4 feet wide, 5 feet long and 5 feet high, the volume equals 100 cubic feet.

2. Wear all Personal Protective Equipment (PPE) required under Precautionary Statements.
3. Use a plastic mixing container large enough to hold the EthylBloc® and Mixing/Buffer Solution. A plastic pail works well for larger applications, a plastic bowl or similar container for smaller applications.
4. First add Mixing/Buffer Solution to the mixing container. Then add the EthylBloc® powder. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the following tables/boxes. [or {For Water Soluble Packets} First add Mixing/Buffer Solution to the mixing container. Then add the water soluble packet of EthylBloc® to the mixing container, making sure the water soluble packet is covered. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the following tables/boxes.]
5. Following the addition of EthylBloc® to the Mixing/Buffer Solution, leave the treatment area immediately. Make sure the area is sufficiently sealed. See following application sections for details.
6. POSTING: Signs should be posted on all potential entry points during EthylBloc® treatment (for at least four hours or as otherwise recommended in the Directions for Use). Signs should state "CAUTION. Do not enter area. EthylBloc® treatment underway." Posting is suggested as a means of ensuring optimal effectiveness of EthylBloc®.
7. After the treatment period ends (see below tables/boxes for specified treatment periods), ventilate treated areas with outside air before reentry.
8. Remaining treatment solution can be disposed of on site or at an approved waste disposal facility.

EthylBloc®

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**SPECIFIC TREATMENT PERIODS****TREATMENT CONDITIONS:** 55 - 75 °F, 4 to 8 hours**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 13                  |
| 1 Green Scoop             | 2 Tbsp                         | 100                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 2500                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 5000                |

**METRIC EQUIVALENT**

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.4                   |
| 1 Green Scoop             | 30 ml                     | 3                     |
| 38 g Water Soluble Packet | 750 ml                    | 75                    |
| 75 g Water Soluble Packet | 1500 ml                   | 150                   |

**TREATMENT CONDITIONS:** 55 to 75 °F, minimum 10 hours**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 200 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 26                  |
| 1 Green Scoop             | 2 Tbsp                         | 200                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 5000                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 10000               |

**METRIC EQUIVALENT**

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.8                   |
| 1 Green Scoop             | 30 ml                     | 6                     |
| 38 g Water Soluble Packet | 750 ml                    | 150                   |
| 75 g Water Soluble Packet | 1500 ml                   | 300                   |

**TREATMENT CONDITIONS:** 35 to 55 °F, minimum 10 hours**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1.5 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Feet to Treat |
|---------------------------|---------------------------|---------------------|
| 1 White Scoop             | 1.5 tsp                   | 13                  |
| 1 Green Scoop             | 3 Tbsp                    | 100                 |
| 38 g Water Soluble Packet | 37 fl oz or 4 2/3 cups    | 2500                |
| 75 g Water Soluble Packet | 75 fl oz or 9 1/3 cups    | 5000                |

**METRIC EQUIVALENT**

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 7 ml                      | 0.4                   |
| 1 Green Scoop             | 45 ml                     | 3                     |
| 38 g Water Soluble Packet | 1125 ml                   | 75                    |
| 75 g Water Soluble Packet | 2250 ml                   | 150                   |

EthylBloc®

Last label revision March 8, 2000

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**Measurements:**

WHITE SCOOP = 0.2 grams EthylBloc® powder

GREEN SCOOP = 1.5 grams EthylBloc® powder

1 teaspoon = 1 tsp = 5 ml

1 Tablespoon = 1 Tbsp = 3 tsp = ½ fl oz

1 fl oz = 2 Tbsp = 30 ml

1 cup = 8 fl oz = 240 ml

38 gram Water Soluble Packet will treat a 20 ft truck container

75 gram Water Soluble Packet will treat a 40 ft truck container

**APPLICATION IN GREENHOUSES PRIOR TO HARVEST**

Fresh cut flowers and bedding, potted flowering, nursery and foliage plants can be treated in the greenhouse just prior to being harvested.

1. The greenhouse must be tightly constructed. Plastic covered houses (especially Adouble-poly®) are generally tighter than fiberglass or glass covered ones.
2. Sections of greenhouses can be enclosed with plastic to make the treatment area smaller, as long as it is sealed sufficiently to prevent the gas from escaping. Excessive leakage reduces effectiveness of EthylBloc®.
3. Make sure all greenhouse vents are closed. Night treatment is recommended mainly because vent closing is more realistic and treatment times can be longer.
4. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
5. All greenhouse treatments should be done at temperatures greater than 55°F (13° C).
6. When calculating treatment volumes, use 2 of the height measured at the ridge/peak for the height measurement. If a greenhouse is 25 feet wide, 100 feet long and 10 feet high, the approximate volume equals  $25 \times 100 \times 10/2 = 12,500$  cubic feet.
7. Follow steps under Treatment Instructions.



**APPLICATION IN ENCLOSED AREAS SUCH AS: HOLDING/STORAGE ROOMS, COOLERS, AND TRUCK TRAILERS**

Plants being held in enclosed areas can be easily treated with EthylBloc®. For example, non-boxed sleeved potted plants and cut flowers (held dry or in solution), or boxed plants and cut flowers with the lids and/or precooling vents completely open and directly exposed to the surrounding atmosphere can be treated. Bedding or potted plants on movable racks are also easily treated.

**Typical treatment areas**

- Retail and wholesale florist coolers including walk-in, storage and/or walk-in/storage combinations;
- Delivery trucks or vans, truck trailers, inter-modal containers, regardless of their size/volume;
- Any room in a building that can be isolated, sealed and aerated/vented to the outside after treatment.

1. Treatment areas should be checked for gas leakage. Excessive leakage reduces effectiveness of EthylBloc®.
2. If needed, use plastic liners, tape and/or other products and procedures to make enclosed areas more gas/air tight
3. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
4. Temperatures should be between 35° and 75° F (13° and 24° C).
5. Follow steps under Treatment Instructions.

**APPLICATION IN AREAS SPECIFICALLY BUILT FOR ETHYLBLOC® TREATMENT**

**General EthylBloc® Treatment Chamber.** It might be appropriate to construct an area to be used solely for EthylBloc® treatment. Constructing such specific EthylBloc® treatment areas has proven to be an effective way of using EthylBloc®. This maximizes EthylBloc® effectiveness and reduces costs by requiring less product to treat a given number of plant units.

While this treatment area could be built using a number of gas impermeable materials, 4.0 to 6.0 mil polyethylene sheeting works well. Just make sure the unit seals properly.

EthylBloc®  
Last label revision March 8, 2000  
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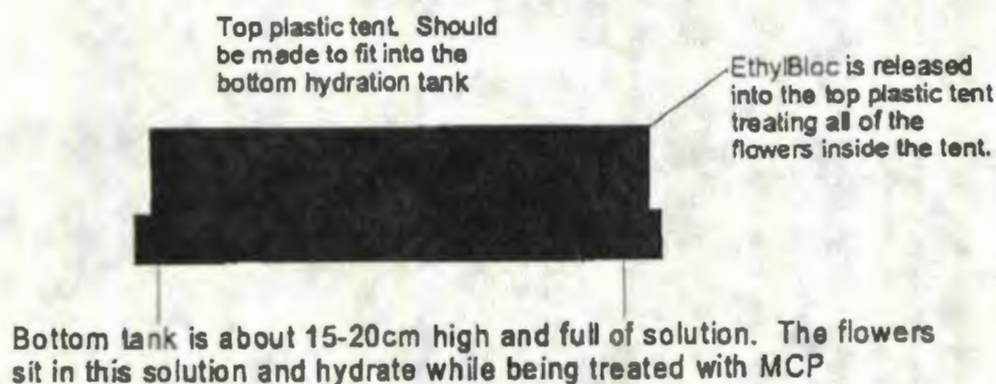


One way to help ensure a good seal where the plastic comes in contact with the flooring is to use hydration solution. The treatment unit base is submerged in a trough of hydration solution a few inches deep thus making a good seal where gas cannot escape.

To use such a treatment area, follow the treatment instructions adjusting for treatment volume and temperatures.

**Cut Flower Hydration EthylBloc® Treatment Chamber.** The top of the chamber can be made of 4.0 to 6.0 mil polyethylene sheeting and a wooden frame, or a single plastic piece that can fit into the bottom hydration tank, or something similar. The bottom tank can be any size tub that is capable of holding hydration solution and flowers. See drawing below.

Figure 1



[[Optional text for similar text above in box] Bottom tank is about 6 to 8 inches (15-20 cm) high and full of hydration solution. The flowers sit in this solution and hydrate while being treated with EthylBloc®.]

Place the flowers in bunches or in buckets in the bottom tank. Place the top plastic tent over the bottom holding tank. The tent's bottom edges must be able to be submerged into the hydration solution in the bottom holding tank to insure a seal. Follow Treatment Instructions making sure the EthylBloc® mixture remains separate from the hydration solution throughout the treatment.



**WARRANTY** Biotechnologies for Horticulture Inc. warrants that this material conforms to the chemical description on the label. Biotechnologies for Horticulture Inc. neither makes nor authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, express or implied, concerning this material. The maximum liability for breach of this warranty shall not exceed the purchase price of this product. Biotechnologies for Horticulture Inc.'s maximum liability for breach of this warranty shall not exceed the purchase price of the product. Buyer and user acknowledge and assume all risks and liabilities resulting from the handling, storage and use of this material, whether or not in accordance with directions.

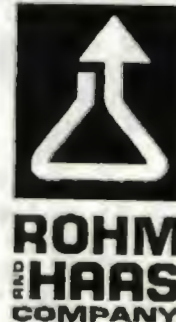
**Questions? Contact Biotechnologies for Horticulture toll-free at (800) 538-3320 or call (843) 538-3839**

SLL/03Mar00  
p:\EthylBloc\Mar00Label.doc



EthylBloc®  
Last label revision March 8, 2000  
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March 8, 2000

Mr. Driss Benmhend  
Biochemical Pesticides Branch  
US EPA Biopesticides and  
Pollution Prevention Division (7511C)  
Office of Pesticide Programs  
1921 Jefferson Davis Highway, CM2  
Arlington, VA 22202

SLL-00-074

Dear Mr. Benmhend:

**Subject: EthylBloc® (EPA Regis. No. 71297-1)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Revised Label Amendment to Adjust Active Ingredient**  
**Content to 0.14%**

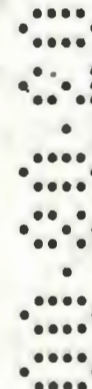
**Reference: Label Amendment Submitted 03Mar00 (SLL-00-068)**

BioTechnologies for Horticulture, Inc. submits the attached revised label amendment to indicate an adjustment in the nominal content of the active ingredient 1-methylcyclopropene (1-MCP) in the registered end-use formulation EthylBloc (EPA Regis. No. 71297-1) to 0.14% from the 0.11% indicated in our 03Mar00 label amendment submission. Revised Confidential Statements of Formula for both the basic and alternate formulations of EthylBloc reflecting the adjustment to 0.14% 1-MCP in the EthylBloc formulation are also attached.

EthylBloc was registered for use on flowers in April, 1999 by BioTechnologies for Horticulture, Inc. (BTH). Rohm and Haas purchased BTH in December, 1999, and subregistered Floralife Inc. (Walterboro, SC) the use of EthylBloc on flowers at that time.

My 03Mar00 label amendment indicated that we recently discovered that the actual 1-MCP ai content of the EthylBloc end-use formulation was about one-fourth of the 0.43% ai content indicated on the product label. I indicated that the decreased ai content was not due to any significant change in the manufacturing process, but that it was due to a less rigorous analytical procedure used by Floralife over the past several years. My 03Mar00 label amendment specified the nominal 1-MCP content as 0.11% in EthylBloc end-use product.

We quantify 1-MCP in EthylBloc end-use product by gas chromatography using a flame ionization detector, and using isobutylene as an internal standard. An aliquot of EthylBloc end-use product is dissolved in buffer solution in a sealed vial, and after equilibration, a sample of the headspace gas is analyzed.



Mr. Benmhend  
08Mar00  
Page 2

The 0.11% ai nominal concentration was determined using an injection port temperature of 250 deg C during the gas chromatographic analysis. Earlier this week, after I had submitted by 03Mar00 label amendment to the Agency, our researchers conducted additional analyses of 1-MCP in EthylBloc using an injection port temperature of 150 deg C in an attempt to reduce a small amount of an apparent degradation product observed in the analysis. Quantitation of 1-MCP in EthylBloc using the reduced injection port temperature of 150 deg C revealed a nominal 1-MCP concentration of 0.14% in the EthylBloc formulation. This slightly greater amount of nominal 1-MCP in the EthylBloc formulation (0.14% vs 0.11%) is likely due to less degradation in the injection port at 150 deg C versus 250 deg C. The only difference in the analyses was the injection port temperature. We now believe 0.14% is the accurate nominal concentration of 1-MCP in the EthylBloc formulation; thus the reason for submitting this revised label amendment.

As I indicated in my 03Mar00 label amendment submission, Floralife, who currently manufactures and sells EthylBloc, stopped production last week when we became aware of this lower ai issue. However, Floralife is a small company and needs to resume production as soon as possible or face significant economic hardship.

Anything that the Agency can do to expedite approval of this revised label amendment so that Floralife may resume production of EthylBloc by the end of this week would be greatly appreciated.

Please contact me by phone (215-592-3581), fax (215-592-3414), or E-mail (rstysl@rohmhaas.com) if you have any questions about this label amendment.

Sincerely,



Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department





Mr. Benmhend  
08Mar00  
Page 3

Administrative materials submitted with this letter:

- 1) EPA Form 8570-1 (OPP Identifier 267630);
  - 2) Revised Product Label for 71297-1 (SLL/08Mar00) (5 copies)
  - 3) Revised Confidential Statement of Formula / Basic Formulation (dated 08Mar00); and
  - 4) Revised Confidential Statement of Formula / Alternate Formulation (dated 08Mar00).
- 

2003



United States  
**Environmental Protection Agency**  
Washington, DC 20460

Registration  
☒ Amendment  
☐ Other  
OPP Identifier Number  
**267630**

**Application for Pesticide - Section I**

|                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                          |                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br><b>71297-1</b>                                                                                                                                                                                    | 2. EPA Product Manager<br><b>Driss Benmhend</b>                                                                                                                                                                                                          | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br><b>EthylBloc®</b>                                                                                                                                                                                 | PM#                                                                                                                                                                                                                                                      |                                                                                                            |
| 5. Name and Address of Applicant (Include Zip Code)<br><b>BioTechnologies for Horticulture, Inc.<br/>100 Independence Mall West<br/>Philadelphia, PA 19106-2399</b><br><input type="checkbox"/> Check if this is a new address | 8. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. <u>538-256</u><br>Product Name: <u>Fertilizer Plus Fungicide XI (Fertilizer + Golden Eagle)</u> |                                                                                                            |

**Section - II**

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Amendment - Explain below.                 | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

**Explanation:** Label amendment to adjust 1-methylcyclopropene active ingredient content on product label from 0.11% to 0.14%, and adjust inert ingredient content on product label from 99.89% to 99.86%, plus revised Confidential Statements of Formula for the basic and an alternate formulation.

**Section - III**

|                                                                                                                                                                     |                                                                               |                                                                                        |                                                             |                                                                                                                                   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |                                                             | 2. Type of Container                                                                                                              |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Metal<br>Plastic<br>Glass<br>Paper<br>Other (Specify) _____ |                                                                                                                                   |  |
| * Certification must be submitted                                                                                                                                   |                                                                               | If "Yes" No. per Unit Packaging wgt. container                                         | If "Yes" No. per Package wgt. container                     |                                                                                                                                   |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            |                                                             | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               | <input type="checkbox"/> Other _____                                                   |                                                             |                                                                                                                                   |  |

**Section - IV**

|                                                                                                                                                                                                                                                            |  |                                                 |  |                                                            |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------|--|------------------------------------------------------------|-------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                              |  |                                                 |  |                                                            |                                           |
| Name<br><b>Stephen L. Longacre, Ph.D.</b>                                                                                                                                                                                                                  |  | Title<br><b>Product Registration Manager</b>    |  | Telephone No. (Include Area Code)<br><b>215 - 582-3581</b> |                                           |
| I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |  |                                                 |  |                                                            | 6. Date Application Received<br>(Stamped) |
| 2. Signature<br>                                                                                                                                                                                                                                           |  | 3. Title<br><b>Product Registration Manager</b> |  |                                                            |                                           |
| 4. Typed Name<br><b>Stephen L. Longacre, Ph.D.</b>                                                                                                                                                                                                         |  | 5. Date<br><b>March 8, 2000</b>                 |  |                                                            |                                           |

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

White - EPA File Copy (original)

Yellow - Applicant Copy





March 8, 2000

Mr. Driss Benmhend  
Biochemical Pesticides Branch  
US EPA Biopesticides and  
Pollution Prevention Division (7511C)  
Office of Pesticide Programs  
1921 Jefferson Davis Highway, CM2  
Arlington, VA 22202

SLL-00-074

Dear Mr. Benmhend:

**Subject: EthylBloc® (EPA Regis. No. 71297-1)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Revised Label Amendment to Adjust Active Ingredient**  
**Content to 0.14%**

**Reference: Label Amendment Submitted 03Mar00 (SLL-00-068)**

BioTechnologies for Horticulture, Inc. submits the attached revised label amendment to indicate an adjustment in the nominal content of the active ingredient 1-methylcyclopropene (1-MCP) in the registered end-use formulation EthylBloc (EPA Regis. No. 71297-1) to 0.14% from the 0.11% indicated in our 03Mar00 label amendment submission. Revised Confidential Statements of Formula for both the basic and alternate formulations of EthylBloc reflecting the adjustment to 0.14% 1-MCP in the EthylBloc formulation are also attached.

EthylBloc was registered for use on flowers in April, 1999 by BioTechnologies for Horticulture, Inc. (BTH). Rohm and Haas purchased BTH in December, 1999, and subregistered Floralife Inc. (Walterboro, SC) the use of EthylBloc on flowers at that time.

My 03Mar00 label amendment indicated that we recently discovered that the actual 1-MCP ai content of the EthylBloc end-use formulation was about one-fourth of the 0.43% ai content indicated on the product label. I indicated that the decreased ai content was not due to any significant change in the manufacturing process, but that it was due to a less rigorous analytical procedure used by Floralife over the past several years. My 03Mar00 label amendment specified the nominal 1-MCP content as 0.11% in EthylBloc end-use product.

We quantify 1-MCP in EthylBloc end-use product by gas chromatography using a flame ionization detector, and using isobutylene as an internal standard. An aliquot of EthylBloc end-use product is dissolved in buffer solution in a sealed vial, and after equilibration, a sample of the headspace gas is analyzed.

**ATTACHMENTS (2)**

**Letter from S. L. Longacre, Ph.D. Product Registration Manager, Agricultural Chemicals  
Registration and Regulatory Affairs Department, Rohm & Haas Co., Philadelphia, PA**

**to**

**Driss Benmhend, Regulatory Action Leader, BPPD/BPB**

**Dated 3/8/2000**



## CONCLUSIONS AND RECOMMENDATIONS

BPB supports the label amendment proposed by the registrant for EthylBloc<sup>®</sup> (EPA Reg. no. 71297-1). The description of the analytical methodology, the revised label, and the revised CSFs are acceptable. No additional data are required.

cc: F. Toghrol, R. S. Jones, D. Benmhend, BPPD Subject File  
R. S. Jones: F.T. CM2, (703) 308-5071: 3/9/2000



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM

4 9 2001

**SUBJECT:** Label Amendment for EthylBloc™ (EPA Symbol. No. 071297-1) containing 0.14% 1-Methylcyclopropene (Chemical No. 224459), a new active ingredient. Review of Product Chemistry Data . DP Barcode D263880; Case No. 063215; Submission No. S576467; No MRID No.

**FROM:** Russell S. Jones, Ph.D., Biologist  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

**THRU:** Freshteh Toghrol, Ph.D., Senior Scientist  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

**TO:** Driss Benmhend, Regulatory Action Leader  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

**ACTION REQUESTED**

Rohm and Haas Co. requests permission to amend the label for EthylBloc™ (EPA Reg. no. 71297-1) to reflect a change in the active ingredient content from 0.43% 1-methylcyclopropene (1-MCP) by weight to 0.14% 1-MCP by weight. The change was requested because new and improved analytical methodology showed that the actual content of 1-MCP in the end-use product was approximately 25% of the a.i. content listed on the label [see attached letter from S. L. Longacre (Rohm and Haas), to D. Benmhend (BPPD), dated 3/8/2000]. In support of the label amendment, the registrant submitted a brief description of the new analytical methodology (see attachment), a revised product label showing a change in the relative amounts of active and other ingredients, and two revised Confidential Statements of Formula (CSFs, dated 3/8/2000) for a basic and alternate formulation.

EthylBloc™ is a powdered product that changes to a gas phase (MCP) when mixed with water or a buffering agent. It is intended for non-food use floral and nursery crops.



Mr. Benmhend  
08Mar00  
Page 2

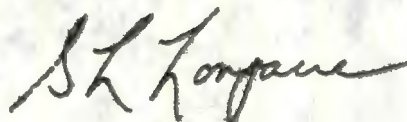
The 0.11% ai nominal concentration was determined using an injection port temperature of 250 deg C during the gas chromatographic analysis. Earlier this week, after I had submitted by 03Mar00 label amendment to the Agency, our researchers conducted additional analyses of 1-MCP in EthylBloc using an injection port temperature of 150 deg C in an attempt to reduce a small amount of an apparent degradation product observed in the analysis. Quantitation of 1-MCP in EthylBloc using the reduced injection port temperature of 150 deg C revealed a nominal 1-MCP concentration of 0.14% in the EthylBloc formulation. This slightly greater amount of nominal 1-MCP in the EthylBloc formulation (0.14% vs 0.11%) is likely due to less degradation in the injection port at 150 deg C versus 250 deg C. The only difference in the analyses was the injection port temperature. We now believe 0.14% is the accurate nominal concentration of 1-MCP in the EthylBloc formulation; thus the reason for submitting this revised label amendment.

As I indicated in my 03Mar00 label amendment submission, Floralife, who currently manufactures and sells EthylBloc, stopped production last week when we became aware of this lower ai issue. However, Floralife is a small company and needs to resume production as soon as possible or face significant economic hardship.

Anything that the Agency can do to expedite approval of this revised label amendment so that Floralife may resume production of EthylBloc by the end of this week would be greatly appreciated.

Please contact me by phone (215-592-3581), fax (215-592-3414), or E-mail (rstysl@rohmhaas.com) if you have any questions about this label amendment.

Sincerely,



Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department





U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Biopesticides and Pollution Prevention Division (7501W)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg.  
Number:

71297-1

Date of Issuance:

Term of Issuance:

Unconditional

Name of Pesticide Product:

EthylBloc®

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

**Biotechnologies for Horticulture, Inc.**  
**751 Thunderbolt Road**  
**Walterboro, SC 29488**

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA sec. 3(c)(5) subject to the comments listed below:

1. Make the following label changes:
  - a. Add the phrase "EPA Registration No. 71297-1 to your label before you release the product for shipment
  - b. Add the appropriate Establishment Number to your label before you release the product for shipment
2. Submit five copies of the final printed labeling before you release this product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec.6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Unconditional registration does not eliminate the need for continual reassessment of a pesticide. If EPA determines, at any time, that additional data are required to maintain in effect, an existing registration, the Agency will require submission of such data under Section 3(c)(2)(B) of FIFRA.

Signature of the Approving Official

*Jane M. Anderson*

4-22-99

(Container label first page only; insert label all pages)

## EthylBloc®

EthylBloc® is a powder that, when mixed with water or a buffer solution, releases a gas to extend the life and usefulness of many fresh cut flowers, potted flowers, bedding, nursery and foliage plants. Crops are treated with this gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. This product is intended for use only on ornamental, non-food crops. Do not use outdoors or in other non-enclosed areas.

**Active Ingredient:** 1-Methylcyclopropene..... 0.43%  
**Other Ingredients:**..... 99.57%  
**Total:** ..... 100.00%

### KEEP OUT OF REACH OF CHILDREN CAUTION

#### Statement of Practical Treatment

IF IN EYES: Flush with plenty of water. Call a physician if irritation persists.  
IF ON SKIN: Wash with plenty of soap and water. Get medical attention.  
IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

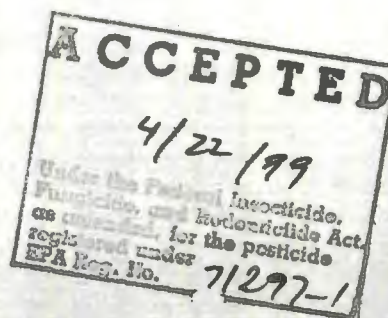
Refer to insert label for additional Precautionary Statements and Directions for use.

Manufactured by: Biotechnologies for Horticulture, Inc.  
751 Thunderbolt Road  
Walterboro, SC 29488

For product information call toll-free (800) 323-3689

EPA Registration No.: 71297-1  
EPA Establishment No.: 32258-IL-1  
U.S. Patent No. 5,518,988

Net Contents: 25, 50, 100 or 200 grams



EthylBloc®  
Last label revision April 22, 1999  
Page 1



## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and mixers of this product must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Protective eyewear (goggles or face shield).
- Rubber gloves.
- For activities in enclosed areas, wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- Applicators and handlers must follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

Users should wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.



## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval (REI). The requirements in this box only apply to the uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: long-sleeved shirt, long pants, shoes plus socks, and a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

For all applications, notify workers of the application by warning them orally and by posting warning signs outside all entrances to the treated area. Treated areas should be vented with outside air before reentry.

**STORAGE AND DISPOSAL** Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.



### **Directions for Use:**

EthylBloc® is a powder that, when added to a Buffer Solution or water, releases a patented gas (*1-Methylcyclopropene, MCP*). When used properly, EthylBloc® can extend the life and usefulness of many fresh cut flowers and potted flowers, bedding, nursery and foliage plants. EthylBloc® works by inhibiting the negative effects of ethylene and thus prevents or reduces premature flower death, leaf and/or flower fall, and leaf yellowing.

EthylBloc® is specifically designed to be used by all levels of the floral and nursery industries, including growers, shippers, wholesalers, bouquet manufacturers, mail order houses and retailers (such as florists, garden centers, nurseries and mass market outlets). EthylBloc® is also very easy to use with almost no labor costs.

Some of the many flowers and plants that can benefit from EthylBloc® treatment include:

Achillea, Aconitum, Agapanthus, Alchemilla, Allium, Alstroemeria, Alyssum, Aphelandra, Aquilegia, Asclepias, Astrantia, Asparagus Fern, Azalea, Begonia, Bouvardia, Brassia (*Schefflera*), Brodiaea (*Triteleia*), Calathea, Campanula, Carnation, Celosia, Centaurea, Chamaedorea, Chelone, Coleus, Cordyline, Cymbidium, Crocosmia (*Montbretia*), Daucus (Queen Annes Lace), Delphinium, Dendrobium, Dianthus, Dicentra, Dizygotheca, Doronicum, Echium, Eremurus, Eustoma (*Lisianthus*), Ficus, Freesia, Fuchsia, Geranium, Gladiolus, Godetia, Gypsophila, Hibiscus, Ilex (Holly), Impatiens, Ixia, Kalanchoe, Kniphofia, Lavatera, Lily, Lysimachia, Miniature Carnation, Monkshood, Pelargonium, Petunia, Philodendron, Phlox, Physostegia, Poinsettia, Radermachera, Rose, Rudbeckia, Salvia, Saponaria, Scabiosa, Silene, Snapdragon, Solidaster, Stock, Streptocarpus, Sweet William, Trachelium, Trollius, Veronica, Wax Flower, and Zygocactus.

Plants must be exposed to this gas in enclosed areas such as greenhouses, rooms, coolers, shipping boxes or trailers. These enclosed areas should be fairly gas tight as excessive leakage will reduce EthylBloc® effectiveness. This product is not intended for use outdoors or in other non-enclosed areas.

EthylBloc® is more effective when plants are exposed to this gas for at least four hours under warm temperature conditions (55° to 75° F, 13° to 24° C). Higher dosages and longer treatment times are required for plants held under lower temperatures (below 55° F, 13° C).

EthylBloc® can be used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. To realize maximum benefits, all of the crops listed above should be treated whether or not they may have been previously treated with EthylBloc® or another anti-ethylene product at an earlier point in the distribution chain. Shipments that you know have already been treated with



EthylBloc® do not have to be retreated. However, as noted above, retreating is not harmful and can even be beneficial. Examples of some species that would likely benefit from additional applications include those with more than one flower per stem (i.e. snapdragons, delphiniums, miniature carnations and alstroemeria) and flowers at different stages of development on the same plant (i.e. geraniums, impatiens, and azaleas).

EthylBloc® comes with a scoop for easy measurement along with the proper Buffer (mixing) Solution. The Buffer Solution is used to facilitate MCP gas release from the white powdered carrier. It contains 0.75% potassium hydroxide and 0.75% sodium hydroxide in water. Users can substitute tap water for the Buffer Solution but the release of MCP gas will not be as efficient. Contact the manufacturer for specific directions if water is used instead of Buffer Solution. Refer to the information presented below for selecting the right number of EthylBloc® scoops and Buffer Solution volume for your application.

**Posting:** Signs should be posted on all points of potential entry into treated areas during treatment with EthylBloc® (for at least four hours or as otherwise recommended in the Directions for Use). Signs should state "CAUTION. Do not enter area. EthylBloc® treatment underway." Posting is suggested as a means of ensuring optimal effectiveness of EthylBloc®.

#### **APPLICATION IN GREENHOUSES PRIOR TO HARVEST**

Fresh cut flowers and bedding, and potted flowering, nursery and foliage plants can be treated in the greenhouse just prior to being harvested.

##### ***To treat with EthylBloc®:***

1. The greenhouse must be tightly constructed. Plastic covered houses (especially "double-poly") are generally tighter than fiberglass or glass covered ones.
2. Sections of greenhouses can be enclosed with plastic to make the treatment area smaller as long as it is sealed properly to prevent the gas from escaping.
3. Make sure all greenhouse vents are closed. Night treatment is recommended mainly because vent closing is more realistic and treatment times can be longer.
4. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
5. The amount of EthylBloc® required depends on the volume of the greenhouse, treatment temperature and treatment time.



6. To determine the approximate greenhouse volume, multiply the greenhouse width x length x  $\frac{1}{2}$  of the height measured at the ridge/peak. For example, if a greenhouse is 25 feet wide x 100 feet long x 10 feet high, the approximate volume equals  $25 \times 100 \times 10/2 = 12,500$  cubic feet.
7. The above-described calculations can also be performed using meters as dosages are presented both in per cubic foot and per cubic meter.
8. All greenhouse treatments should be done at temperatures greater than 55° F (13° C).
9. For treatment times from four to eight hours, the correct EthylBloc® dosage is one level scoop per 100 cubic feet or one level scoop per 3.0 cubic meters. **Note:** One level scoop equals about 1.5 grams.
10. For treatment times from 12 to 16 hours, the correct EthylBloc® dosage is reduced to one level scoop per 200 cubic feet or one level scoop per 6.0 cubic meters.
11. The correct amount of Buffer Solution to use is one ounce (about 30 ml) per level scoop of EthylBloc®.
12. The mixing container should be made out of plastic and be large enough to hold the EthylBloc® and Buffer Solution. A plastic pail works well for larger applications while a plastic bowl or similar container for smaller applications.
13. Please refer to **Tables One, Two and Three** for examples of recommended EthylBloc® dosages based on room size, treatment temperature and treatment time.
14. To mix:
  - a. Wear all Personal Protective Equipment (PPE) required under Precautionary Statements.
  - b. First add the proper amount of EthylBloc® to the mixing container.
  - c. Then add the proper amount of Buffer Solution, making sure that all of the EthylBloc® powder is covered.
  - d. Briefly stir the mixture for about 5 to 10 seconds and then leave the treatment area immediately, making sure the area is properly sealed behind you.
15. Remaining mixing solution (which no longer contains MCP) can be disposed of on site or at an approved waste disposal facility.



## **APPLICATION IN HOLDING/STORAGE ROOMS, COOLERS, TRUCK TRAILERS AND OTHER ENCLOSED AREAS**

Non-boxed crops being held in enclosed areas can be easily treated with EthylBloc®. For example, sleeved potted plants and cut flowers (held dry or in solution) that are not boxed can be treated. Boxed plants and cut flowers with the lids and/or precooling vents completely open can also be treated as long as the box openings are directly exposed to the surrounding atmosphere and thus the EthylBloc® gas. Bedding or potted plants on movable racks are easily treated.

Examples of typical areas that could be used for treating crops with EthylBloc® include:

- Retail florist coolers including walk-in, storage and/or walk-in/storage combinations;
- Wholesale florist coolers;
- Delivery trucks or vans, regardless of their size/volume;
- Truck trailers;
- Inter-modal containers;
- Any room in a building that can be isolated, sealed and aerated/vented to the outside after treatment;
- Boxed crops if the boxes were enclosed in plastic such as being shrink-wrapped.

**Note:** Some of the treatment area examples presented above may require plastic liners, tape and/or other products and procedures to make them more gas tight.

### ***To treat with EthylBloc®:***

1. Measure the size of the room/cooler/trailer (length, width and height) in feet or meters.
2. Multiply these three numbers together to obtain the volume of the room in cubic feet or cubic meters.

3. Refer to **Tables One and Two** for the EthylBloc® rates if the treatment room and products are 55° F (13° C) or higher. .
4. If the treatment and/or product temperature is below 55° F (13° C), the correct EthylBloc® dosage is three level scoops per 100 cubic feet and three level scoops per 3.0 cubic meters (see **Table Three**).
5. The mixing container should be made out of plastic and be large enough to hold the EthylBloc® and Buffer Solution. A plastic pail works well for larger applications while a plastic bowl or similar container for smaller applications.
6. Please refer to **Table One, Two and Three** for examples of the recommended rates based on treatment temperatures and time.
7. To mix:
  - a. Wear all Personal Protective Equipment (PPE) required under Precautionary Statements.
  - b. First add the proper amount of EthylBloc® to the mixing container;
  - c. Then add the proper amount of Buffer Solution, making sure that all of the EthylBloc® powder is covered;
  - d. Briefly stir the mixture for about 5 to -10 seconds and then leave the treatment area immediately, making sure the area is properly sealed behind you.
8. Remaining mixing solution (which no longer contains MCP) can be disposed of on site or at an approved waste disposal facility.

#### **APPLICATION IN AREAS SPECIFICALLY BUILT FOR ETHYLBLOC® TREATMENT**

**General EthylBloc® Treatment Chamber.** It might be appropriate to construct an area to be used solely for EthylBloc® treatment. By doing so one can maximize the EthylBloc® effectiveness and reduce costs by requiring less EthylBloc® to treat a given number of plant units.

While this treatment area could be built using a number of gas impermeable materials, 4.0 to 6.0 mil polyethylene should work well. Just make sure the unit is sealed properly.



One way to help ensure a good seal where the plastic comes in contact with the floor is to use water. Namely, the base (plastic) of the treatment unit is submerged in a trough of water a few inches deep thus making a good seal where gas cannot escape.

To use such a treatment area, follow the same directions presented above for greenhouses and other enclosed areas making sure you adjust the rates based on crop and room temperatures. Constructing such specific EthylBloc® treatment areas has proven to be an effective way of using EthylBloc®.

**Cut Flower Hydration EthylBloc® Treatment Chamber.** The top of the chamber can be made of 4.0 to 6.0 mil polyethylene and a wooden frame, a single plastic piece that can fit into the bottom hydration tank, or something similar. The bottom tank can be any size tub that is capable of holding solutions. See drawing below.



Place the flowers into the bottom tank in bunches or buckets. Place the top plastic tent over the bottom holding tank. The tent's bottom edges must be able to be submerged into the solution to the bottom of the tank to insure a seal. Lift an end of the tent up and place the bowl or bucket containing EthylBloc® powder into the chamber. Place the Buffer Solution into the bowl or bucket, totally covering the powder. The contents in the bowl/bucket must remain separate from the solution in the tank throughout the treatment. Immediately seal the tent by submerging the walls of the tent in the solution to the bottom of the tank. Follow EthylBloc® use directions already presented.



**Table One:** EthylBloc® and Buffer Solution rates based on treatment temperatures being at least 55° F (13° C) and treatment time be a minimum of four and up to eight hours in various room sizes. Rates not given can be calculated by combining treatment room sizes.

| TREATMENT ROOM SIZE |              | ETHYLBLOC®<br>Rate: 900ppb |       | BUFFER SOLUTION |             |
|---------------------|--------------|----------------------------|-------|-----------------|-------------|
| cubic feet          | cubic meters | scoops                     | Grams | ounces          | milliliters |
| 100                 | 3            | 1                          | 1.5   | 1               | 30          |
| 500                 | 15           | 5                          | 7.5   | 5               | 150         |
| 1000                | 30           | 10                         | 15.0  | 10              | 300         |
| 2500                | 75           | 25                         | 37.5  | 25              | 750         |
| 5000                | 150          | 50                         | 75.0  | 50              | 1500        |
| 10000               | 300          | 100                        | 150.0 | 100             | 3000        |

**Note:** A minimum four-hour exposure is required. Overnight exposure (eight hours) is even better.

**Table Two:** EthylBloc® and Buffer Solution rates based on treatment temperatures being at least 55° F (13° C) and treatment time be a minimum of 12 to 16 hours in various room sizes. Rates not given can be calculated by combining treatment room sizes.

| TREATMENT ROOM SIZE |              | ETHYLBLOC®<br>Rate: 450 ppb |       | BUFFER SOLUTION |             |
|---------------------|--------------|-----------------------------|-------|-----------------|-------------|
| cubic feet          | cubic meters | scoops                      | grams | ounces          | milliliters |
| 200                 | 6            | 1                           | 1.5   | 1               | 30          |
| 1000                | 30           | 5                           | 7.5   | 5               | 150         |
| 2000                | 60           | 10                          | 15.0  | 10              | 300         |
| 5000                | 150          | 25                          | 37.5  | 25              | 750         |
| 10000               | 300          | 50                          | 75.0  | 50              | 1500        |
| 20000               | 600          | 100                         | 150.0 | 100             | 3000        |

**Note:** A minimum 12 to 16-hour exposure is required.

**Table Three:** EthylBloc® and Buffer Solution rates based on treatment temperatures being between 35° and 55° F (3° and 13° C) and treatment time be a minimum of 10 hours in various room sizes. Rates not given can be calculated by combining treatment room sizes.

| TREATMENT ROOM SIZE |              | ETHYLBLOC®<br>Rate: 900 ppb |       | BUFFER SOLUTION |             |
|---------------------|--------------|-----------------------------|-------|-----------------|-------------|
| cubic feet          | cubic meters | scoops                      | grams | ounces          | milliliters |
| 100                 | 3            | 1.0                         | 1.5   | 1.5             | 45          |
| 500                 | 15           | 7.5                         | 11.3  | 7.5             | 225         |
| 1000                | 30           | 15.0                        | 22.5  | 15.0            | 450         |
| 2500                | 75           | 30                          | 45    | 37.5            | 1125        |
| 5000                | 150          | 60                          | 90    | 75.0            | 2250        |
| 10000               | 300          | 120                         | 180   | 150.0           | 4500        |

**Note:** a minimum 10 hour exposure period is required for plants and flowers being held at 55° F (13° C) or lower. Longer exposures are even better.

**WARRANTY** Biotechnologies for Horticulture Inc. warrants that this material conforms to the chemical description on the label. Biotechnologies for Horticulture Inc. neither makes nor authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, express or implied, concerning this material. The maximum liability for breach of this warranty shall not exceed the purchase price of this product. Biotechnologies for Horticulture Inc.'s maximum liability for breach of this warranty shall not exceed the purchase price of the product. Buyer and user acknowledge and assume all risks and liabilities resulting from the handling, storage and use of this material, whether or not in accordance with directions.

**Questions? Contact Biotechnologies for Horticulture toll-free at (800) 538-3320 or call (843) 538-3839**



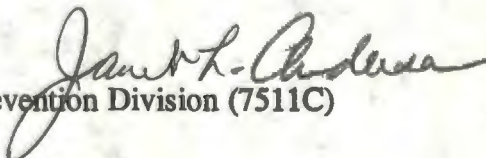
APR 20 1999

**MEMORANDUM**

**SUBJECT:** Consideration of unconditional registration of the new chemical Methylcyclopropene (EPA File Symbol 71297-R; PC Code 224459). This chemical will be used in confined areas to extend the life and usefulness of fresh cut flowers and potted flowering, bedding nursery and foliage plants

**..... DECISION MEMORANDUM .....**

**FROM:** Janet L. Andersen, Director  
Biopesticides and Pollution Prevention Division (7511C)



**TO:** Susan B. Hazen, Acting Deputy Director  
Office of Pesticide Programs

**ISSUE**

Should the Agency grant unconditional registration under Section 3(c)(5) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for Methylcyclopropene (MCP) (PC Code 224459)?

This compound will be used in coolers, greenhouses, shipping boxes/containers and other enclosed areas to extend the life and usefulness of fresh cut flowers and potted flowering, bedding nursery and foliage plants.

**CONCLUSION**

All data requirements for granting this registration under FIFRA Section 3(c)(5) have been fulfilled. There is no technical compound. The end use product EthylBloc® containing

0.43% of 1- Methylcyclopropene (MCP), is manufactured by an integrated process. MCP has a nontoxic mode of action, and acts as an ethylene inhibitor.

MCP has been considered in light of the relevant safety factors in the Food Quality Protection Act (FQPA) of 1996 and under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). A determination has been made that because of the low toxicity and the limited exposure to this product, no unreasonable adverse effects will result from the use of this compound when label instructions are followed. Furthermore, BPPD has not identified any subchronic, chronic, immune, endocrine, or nondietary exposure issues as they may affect children and the general U.S. population.

The end use product is intended for use in non-food enclosed areas. As a result, direct exposure of non-target organisms is not expected to occur. BPPD believes that MCP use according to label directions, should result in no significant adverse effects to wildlife.

Refer to the Executive Summary in the Registration Eligibility Document for methylcyclopropene for more details.

#### OFFICE DIRECTOR'S CONCURRENCE

The Biopesticides and Pollution Prevention Division recommends that methylcyclopropene be unconditionally registered under Section 3(c)(5) of FIFRA.

Concurrence: Sean B. Bly

Non-Concurrence: \_\_\_\_\_

Date: 4/22/99



April 21, 1998

Phone conversation with Jess R. Martineau


Subject: EthyBloc  
EPA Reg. No. 71297-R

I talked with Jess Martineau this after noon and informed him that the application for registration for the product listed above has been reviewed again, and more deficiencies have been found in the application package. Roy Sjoblad sent a letter on Feb. 11, 1998 to Mr. Martineau where he detailed all the deficiencies to correct before this application is given further consideration. I explained to Mr. Martineau that the documents he sent and received by the Agency on march 18, 1998 are not sufficient to correct the deficiencies.

I told Mr. Martineau that the following item have to be included:

- 1- items 05 and 06 of the letter sent by Roy Sjoblad on February 11, 1998.
- 2- Eco. Toxicity data are required in forms of studies or waiver requests with an explanation of why the Agency should grant Eco. Tox. Waivers for the registration of the product listed above.

At the end of our conversation, Mr. Martineau agreed to send the documents listed above.

  
Driss Benmhend  
OPP/BPPD/BPB

 Suzanne Krolkowski

04/25/01 05:20 PM

To: Mike Mendelsohn/DC/USEPA/US@EPA

cc: Driss Benmhend/DC/USEPA/US@EPA, Janet

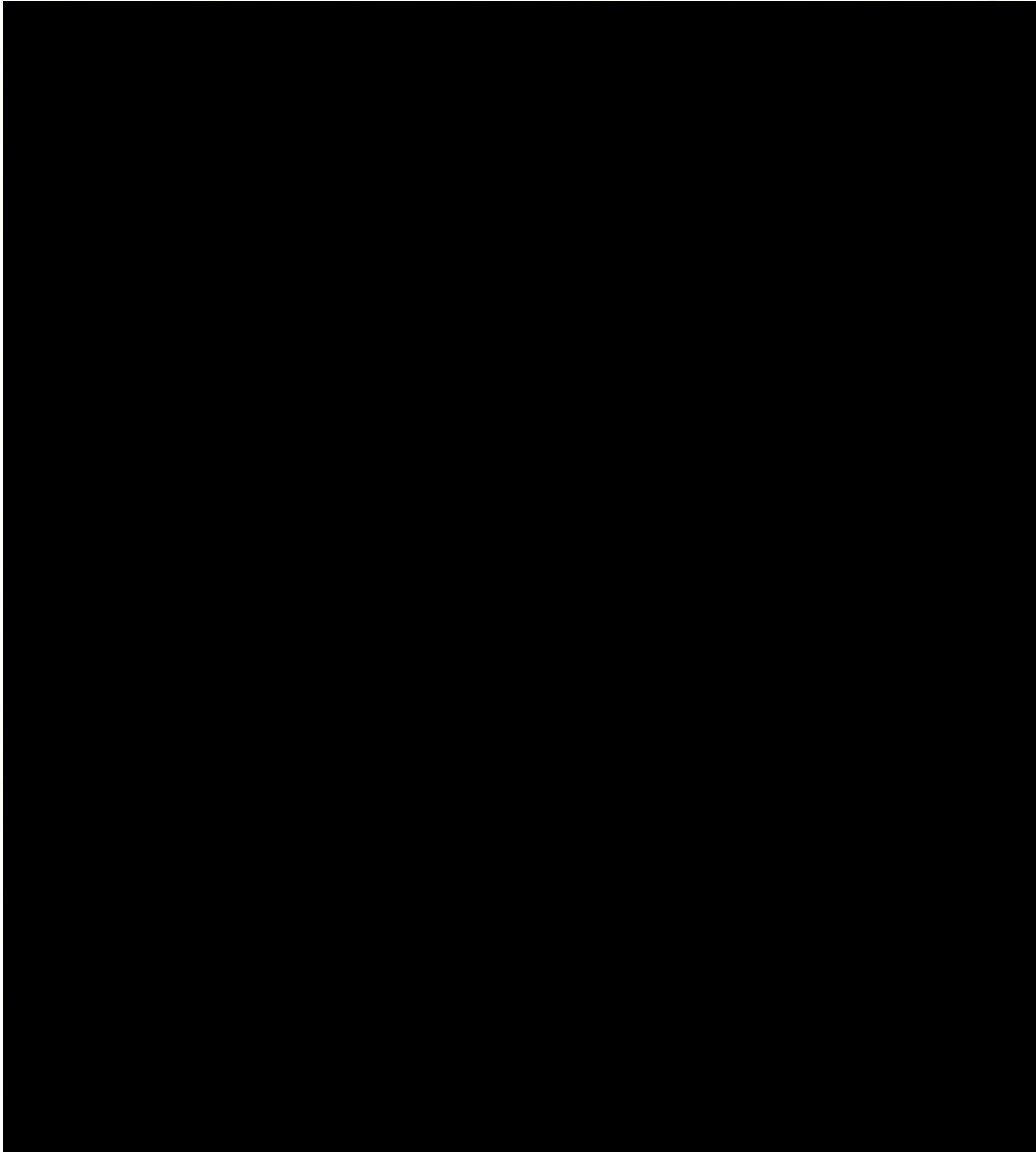
Andersen/DC/USEPA/US@EPA, Roger

Gardner/DC/USEPA/US@EPA, Russell

Jones/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA

Subject: Re: REVISED VERSION: Question about tolerance exemption 

*Attorney-Client Advice  
Do Not Disclose*

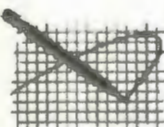




[REDACTED]

Suzanne Krolikowski  
(202) 564-5632  
EPA's Office of General Counsel

Mike Mendelsohn

 Mike Mendelsohn  
04/20/01 07:21 AM


To: Suzanne Krolikowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Janet  
Andersen/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA  
Subject: Re: REVISED VERSION: Question about tolerance exemption

Suzanne,

[REDACTED]

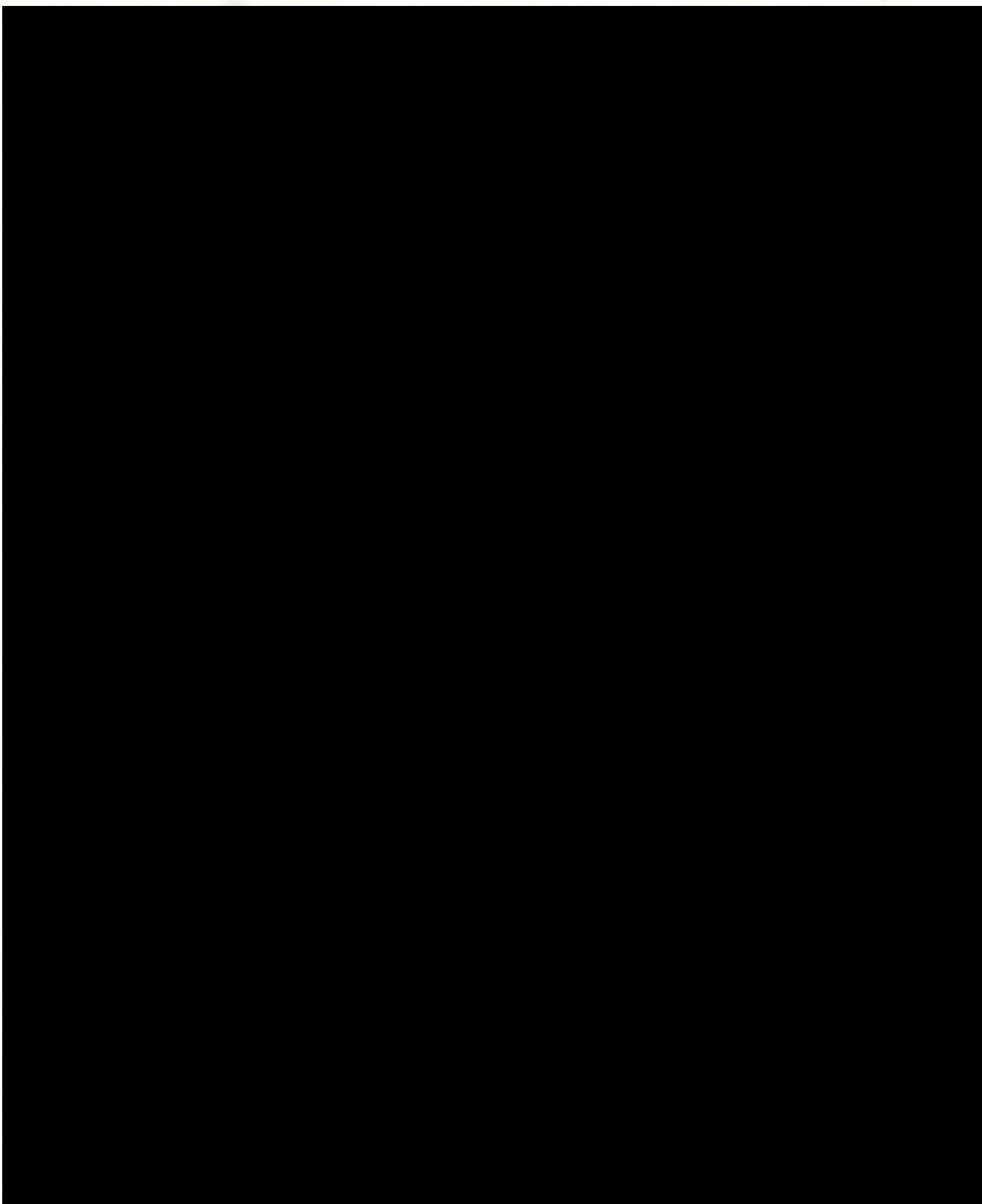
Mike

Suzanne Krolikowski

 Suzanne Krolikowski  
04/19/2001 07:46 PM

To: Sheryl Reilly/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Janet  
Andersen/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA  
Subject: Re: REVISED VERSION: Question about tolerance exemption

*Attorney-Client Advice  
Do Not Disclose*



Suzanne Krolikowski  
(202) 564-5632  
EPA's Office of General Counsel




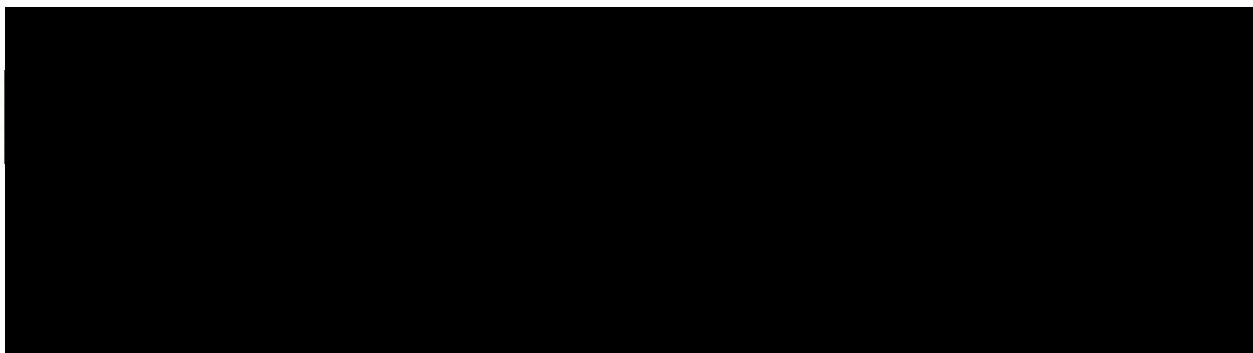
Sheryl Reilly

 Sheryl Reilly

04/19/2001 09:40 AM

To: Suzanne Krolkowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Janet  
Andersen/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA

Subject. Re: REVISED VERSION: Question about tolerance exemption 

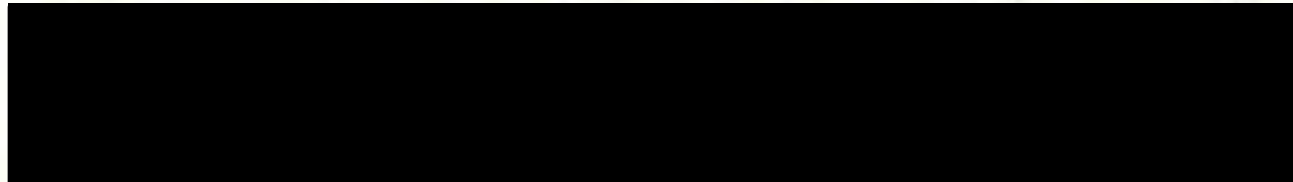


Thanks,  
Sheryl

**Janet Andersen**

04/18/01 07:08 AM

To: Suzanne Krolkowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA  
Subject: Re: Question about tolerance exemption



Suzanne Krolkowski

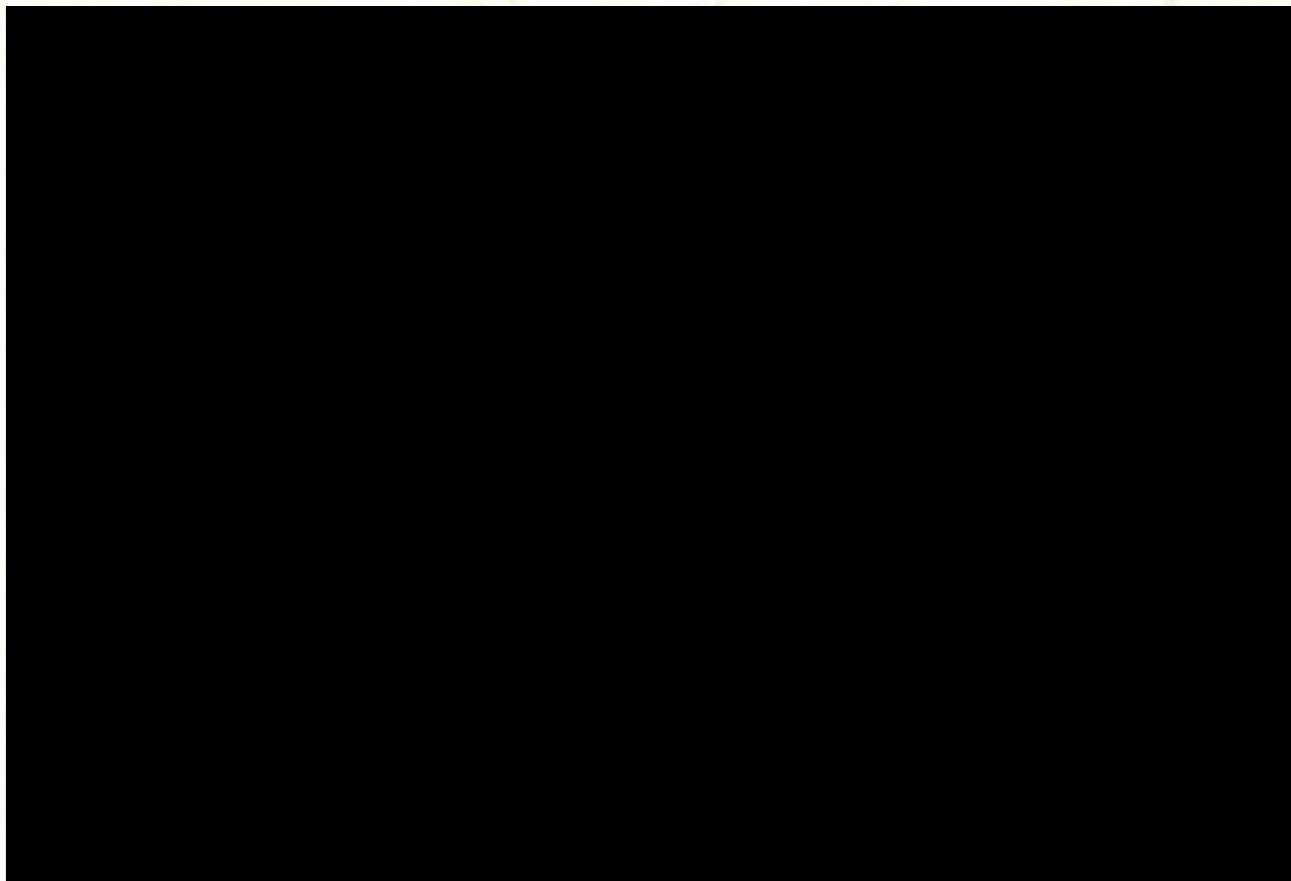
**Suzanne Krolkowski**

04/17/01 06:48 PM

To: Janet Andersen/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA  
Subject: Re: Question about tolerance exemption

*Attorney-Client Advice  
Do Not Disclose*

Janet and Sheryl,





[REDACTED]

Janet Andersen

Janet Andersen  
04/17/2001 04:58 PM

To: Sheryl Reilly/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Suzanne  
Krolikowski/DC/USEPA/US@EPA  
Subject: Re: Question about tolerance exemption

[REDACTED]

Sheryl Reilly

Sheryl Reilly  
04/17/01 02:30 PM

To: Suzanne Krolikowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, (bcc: Janet Andersen/DC/USEPA/US)  
Subject: Question about tolerance exemption

Hi, Suzanne,

[REDACTED]

**Suzanne Krolkowski**

04/18/01 05:48 PM

To: Janet Andersen/DC/USEPA/US@EPA

cc: Driss Benmhend/DC/USEPA/US@EPA, Mike

Mendelsohn/DC/USEPA/US@EPA, Roger

Gardner/DC/USEPA/US@EPA, Russell

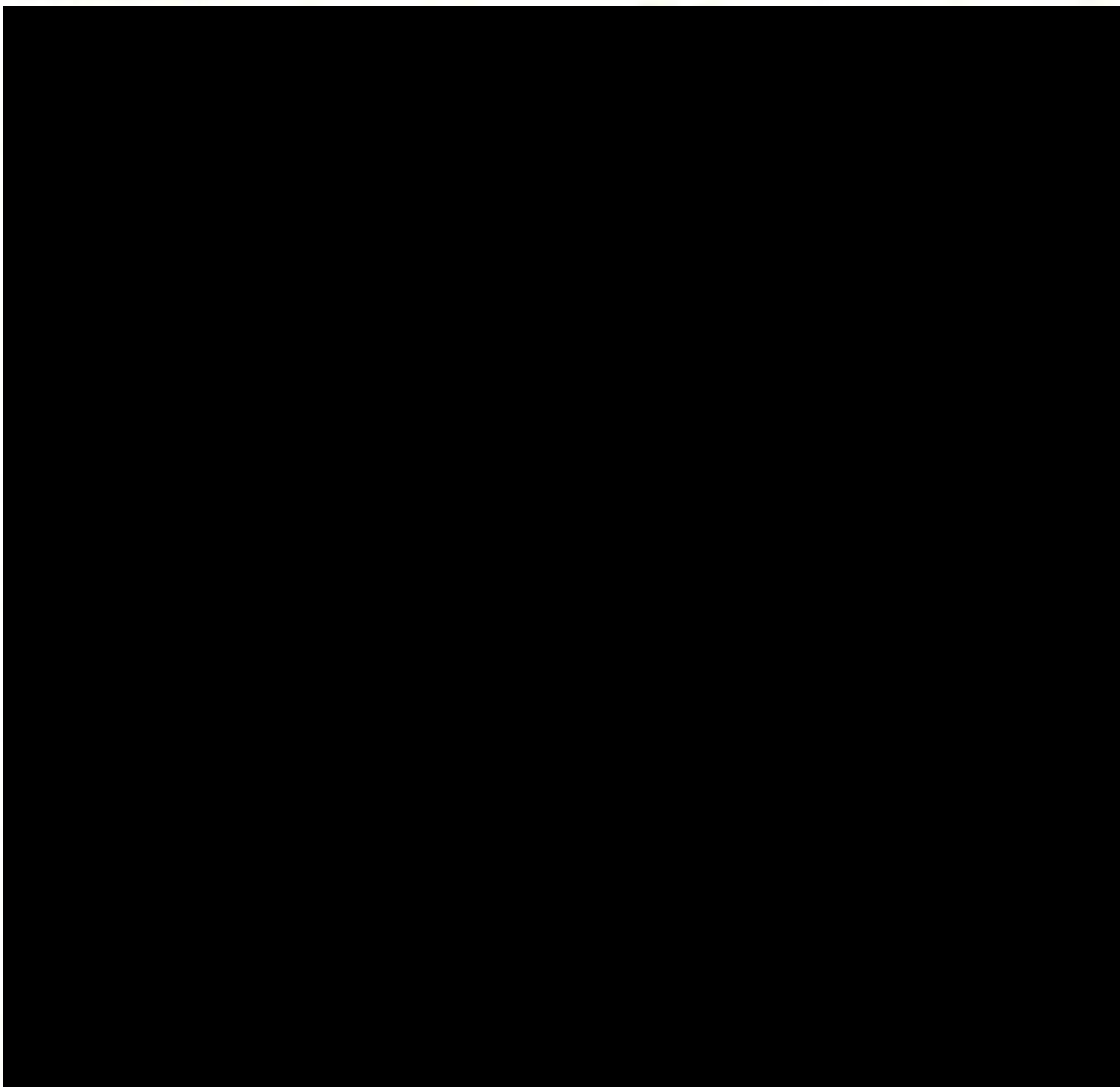
Jones/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA

Subject: REVISED VERSION: Question about tolerance exemption

*Attorney-Client Advice*

*Do Not Disclose*

Janet and Sheryl,



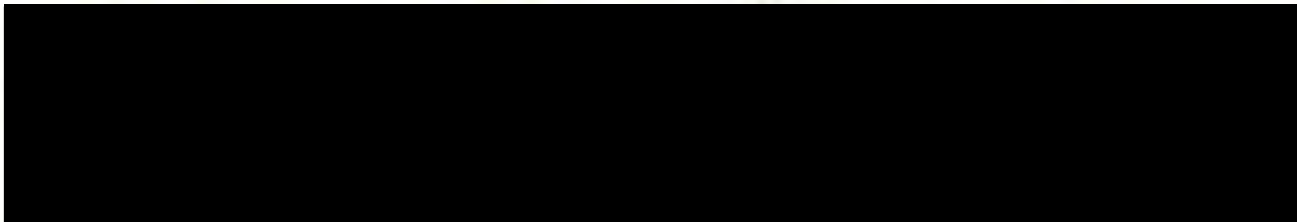
Janet Andersen

\*Privileged internal deliberative and attorney-client communication\*



Janet Andersen  
04/17/2001 04:58 PM

To: Sheryl Reilly/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Suzanne  
Krolikowski/DC/USEPA/US@EPA  
Subject: Re: Question about tolerance exemption



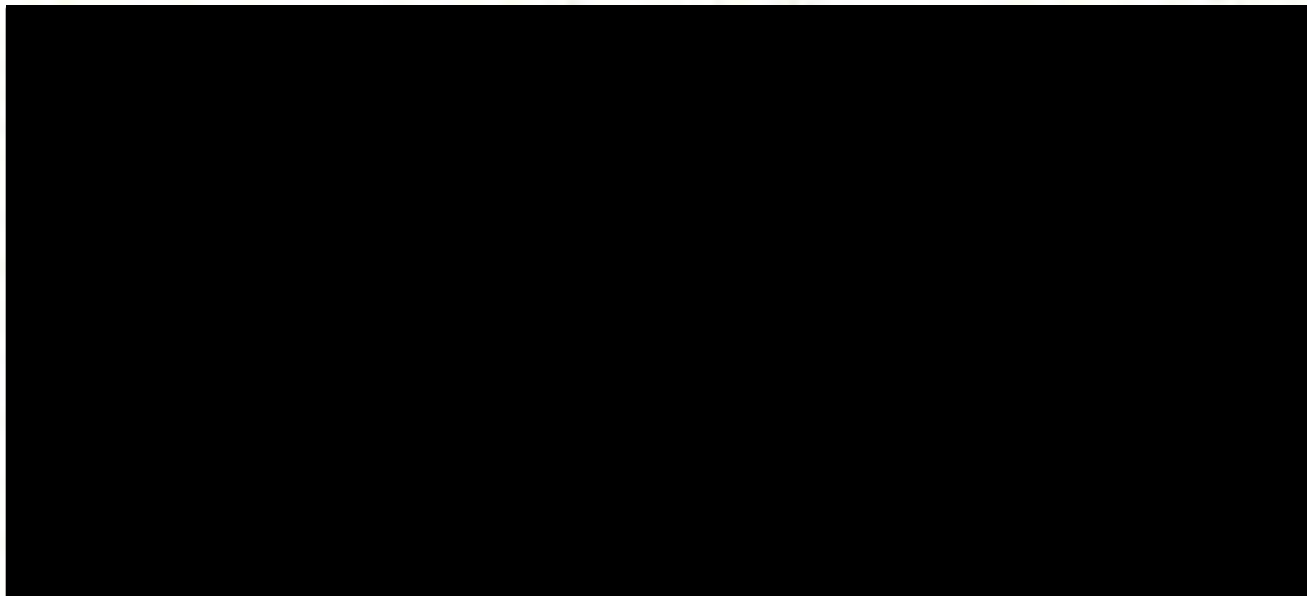
Sheryl Reilly



Sheryl Reilly  
04/17/01 02:30 PM

To: Suzanne Krolikowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, (bcc: Janet Andersen/DC/USEPA/US)  
Subject: Question about tolerance exemption

Hi, Suzanne,



21

March 10, 2005

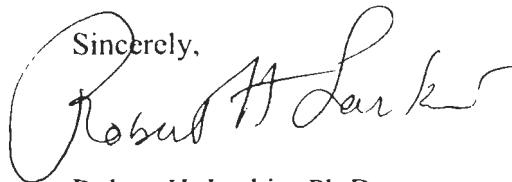
Mr. Driss Benmhend  
Office Of Pesticide Programs (7511C)  
Biopesticides and Pollution Protection Division  
U.S Environmental Protection Agency  
Room 910, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

Dear Mr. Benmhend:

Re: EthylBloc™ Technology (EPA Registration Number 71297-1)  
Confidential Statements Of Formula  
Notification to Add New Sources of Inert Ingredients

Enclosed is an application to notify EPA that additional sources of inert ingredients are being added to the current Confidential Statements of Formula for EthylBloc™ Technology (EPA Registration Number 71297-1). Two copies of each of the three revised CSF's for EthylBloc™ Technology are enclosed. This amendment is being made by notification and is consistent with the notifications allowed under PR Notice 98-10.

Sincerely,



Robert H. Larkin, Ph.D.



**AgroFresh™**

727 Norristown Road, P.O. Box 904, Spring House, PA 19477-0904  
www.smartfresh.com • (USA) 866-206-1001 • (INT) +1 215-641-7000



|                                                                                                                                                                            |                                           |                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------|
| <br><b>United States</b><br><b>Environmental Protection Agency</b><br>Washington, DC 20460 | Registration                              | OPP Identifier Number |
|                                                                                                                                                                            | Amendment                                 |                       |
|                                                                                                                                                                            | <input checked="" type="checkbox"/> Other |                       |

**Application for Pesticide - Section I**

|                                                                                                                                                                                                                                              |                                                 |                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br><b>71297</b>                                                                                                                                                                                                    | 2. EPA Product Manager<br><b>Driss Benmhend</b> | 3. Proposed Classification<br><br><div style="display: flex; justify-content: space-between;"> <span>None</span> <span>Restricted</span> </div> <div style="text-align: center;"> <input checked="" type="checkbox"/> </div> |
| 4. Company/Product (Name)<br><b>EthylBloc Technology</b>                                                                                                                                                                                     | PM#                                             |                                                                                                                                                                                                                              |
| 5. Name and Address of Applicant (Include Zip Code)<br><b>AgroFresh Inc./Rohm and Haas Company</b><br><b>100 Independence Mall West</b><br><b>Philadelphia, PA 19106-2399</b><br><br><input type="checkbox"/> Check if this is a new address |                                                 | 6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(1), my product is similar or identical in composition and labeling to:<br>EPA Reg. No.<br><br>Product Name                                          |

**NOTIFICATION**

Date Reviewed: 4/20/95

Reviewed By: FRAZER


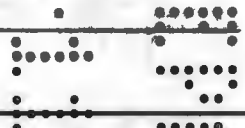
**Section - II**

|                                                                   |                                                                                                                                          |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.               | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____<br><input type="checkbox"/> "Me Too" Application. |
| <input checked="" type="checkbox"/> Notification - Explain below. | <input type="checkbox"/> Other - Explain below.                                                                                          |

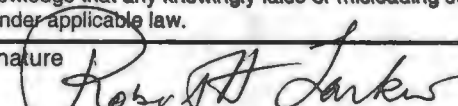
**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.)

This is a Notification consistent with PR Notice 98-10, Paragraph III.B.1 to include several alternate sources of the inerts in the registered product EthylBloc Technology (EPA Registration Number 71297-1). A revised Confidential Statement of Formula is being submitted for the basic and the two alternate formulations of the product. This Notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling, or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. 1001 to willfully make any false statements to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, the product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

**Section - III**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Material This Product Will Be Packaged In:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                         |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                                                                                                     | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes"      No. per<br>Unit Packaging wgt.      container | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes"      No. per<br>Package wgt      container                                                                           | 2. Type of Container<br><input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____<br><input type="checkbox"/> Drum _____ |
| * <b>Certification must be submitted</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                         |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                                                                                                                                                                                                                                                                                                                                                                  | 4. Size(s) Retail Container                                                                                                                  | 5. Location of Label Directions<br><input type="checkbox"/> On Label <br><input type="checkbox"/> On Labeling accompanying product |                                                                                                                                                                                                                                                         |
| 6. Manner in Which Label is Affixed to Product<br><div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> <input type="checkbox"/> Lithograph<br/> <input type="checkbox"/> Paper glued<br/> <input type="checkbox"/> Stenciled         </div> <div style="width: 40%;"> <input type="checkbox"/> Other _____         </div> <div style="width: 20%; text-align: center;">  </div> </div> |                                                                                                                                              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                         |

**Section - IV**

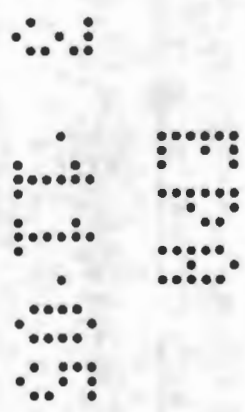
|                                                                                                                                                                                                                                                            |                                                         |                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                              |                                                         |                                                                                      |
| Name<br><b>Robert H. Larkin</b>                                                                                                                                                                                                                            | Title<br><b>President, Regulatory Solutions, LLC</b>    | Telephone No. (Include Area Code)<br><b>215-284-5702</b>                             |
| I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |                                                         | 6. Date Application Received<br><br><div style="text-align: center;">(Stamped)</div> |
| 2. Signature<br>                                                                                                                                                        | 3. Title<br><b>President, Regulatory Solutions, LLC</b> |                                                                                      |

|                                   |                          |
|-----------------------------------|--------------------------|
| 4. Typed Name<br>Robert H. Larkin | 5. Date<br>March 7, 2005 |
|-----------------------------------|--------------------------|

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete.

White - EPA File Copy (original)

Yellow - Applicant Copy









Mari Duggard

09/07/04 01:59 PM

To: rlarkin@agrofresh.com

CC:

Subject: Label changes to EthylBloc (71297-1)

Dear Mr. Larkin,

Per our conversation today (Tuesday 7 Sept 2004), below are the slight revisions that need to be made to the label (Ag Use requirements). Once you have made these changes to the label, please electronically send it via PDF attachment.

revisions in **bold**: please revise the Ag. Use Requirements statement on page 3 of 11

#### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. this Standard contains requirements for the protection of agricultural workers on farms, **forests**, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), **notification to workers**, and restricted-entry interval. The requirements in **this box** only apply to uses of this product that are covered by the Worker Protection Standard.

Should you have any questions, comments or concerns please feel free to reply to this e-message, or call me at 703-308-0028.

Sincerely,

Mari L. Duggard,  
Regulatory Action Leader  
Biochemical Pesticides Branch  
Biopesticides and Pollution Prevention Division (7511C)  
703-308-0028

Note to jacket → courtesy e-mail letting Robert Larkin of AgroFresh, Inc know of TINY deficiencies, as we recently concluded that this product was subject to WPS.  
(see letter dated 12 Jul 2004)  
MD



United States Environmental Protection Agency

OCT 01 2004

766612/300  
ND 17

Robert H. Larkin  
Agro Fresh Inc.  
c/o Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA 19105

RE: Your Re-submission application dated 6 Aug 2004

Product Name: EthylBloc

EPA Registration Number: 71297-1

Dear Mr. Larkin:

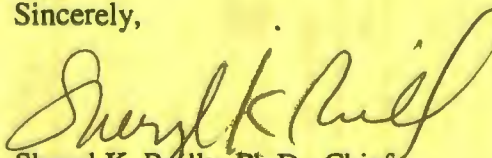
The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(A), as amended, is acceptable provided that you:

1. Submit and/ or cite all data required for registration/ re-registration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit five (5) copies of your final printed labeling before you release the product for your shipment. Final printed labeling means the label or labeling of the product when distributed or sold. Clearly legible reproductions or photo reductions will be accepted for unusual labels, such as those silk-screened directly onto glass, metal containers, large bags, or drum labels.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

If you have questions, please contact Mari Duggard, at 703-308-0028, or by e-mail at [duggard.mari@epa.gov](mailto:duggard.mari@epa.gov).

Sincerely,



Sheryl K. Reilly, Ph.D., Chief  
Biochemical Pesticide Branch  
Biopesticides and Pollution  
Prevention Division (7511C)

Enclosures: Copy of stamped Acceptance CONCURRENCES

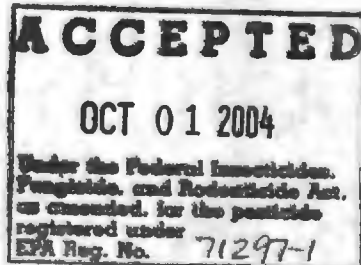
|         |            |         |         |  |  |  |  |  |
|---------|------------|---------|---------|--|--|--|--|--|
| SYMBOL  | 7511C      | 7546    | 7511C   |  |  |  |  |  |
| SURNAME | Duggard    | Peter   | Reilly  |  |  |  |  |  |
|         | 15 Sept 04 | 9/23/04 | 9/30/04 |  |  |  |  |  |

(Container label first page only; insert label all pages)

## EthylBloc® Technology

EthylBloc® technology is a powder that, when mixed with a Mixing/Buffer solution or water, releases a gas to extend the life and usefulness of many fresh cut flowers, potted flowers, bedding, nursery and foliage plants. Plants are treated with this gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. This product is intended for use only on ornamental, non-food crops. Do not use outdoors or in other non-enclosed areas.

Active Ingredient: 1-Methylcyclopropene.....0.14%  
Other Ingredients:.....99.86%  
Total: .....100.00%



**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

### FIRST AID

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

Net Contents: 1.34 oz. [38g (water soluble packet)], 2.6 oz. [75 g (water soluble packet)], and 3.5 oz. [100 g bottle]



EPA Registration No.: 71297-1  
EPA Establishment No.: 32258-SC-001  
U.S. Patent No. 5,518,988

EthylBloc® is a registered trademark of Rohm and Haas Company

AgroFresh Inc.  
A Fully Owned Subsidiary of Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA 10106  
215 592-3000

## **PRECAUTIONARY STATEMENTS**

### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and mixers of this product must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Protective eyewear (goggles or face shield).
- Rubber gloves.
- As a general precaution when exposed to a gas, for activities in enclosed areas wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- Applicators and handlers must follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas prior to venting the volatile active ingredient from the treatment area.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, prior to venting the volatile active ingredient from the treatment area is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N,R,P, or HE prefilter



### **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

EthylBloc® can extend the life and usefulness of many fresh cut flowers and potted flowers, bedding, nursery and foliage plants. It works by inhibiting the negative effects of ethylene and thus prevents or reduces premature flower death, leaf and/or flower fall, and leaf yellowing.

EthylBloc® is specifically designed to be used by all levels of the floral and nursery industries, including growers, shippers, wholesalers, bouquet manufacturers, mail-order houses and retailers (such as florists, garden centers, nurseries and mass-market outlets). EthylBloc® is very easy to use with almost no labor costs.

EthylBloc® can be used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. It comes with two scoops for easy measuring and the proper Mixing/Buffer Solution. [Optional: EthylBloc® is in a water soluble package for easy use with the proper Buffer (mixing) solution.] The Mixing/Buffer Solution is used to facilitate gas release. [Optional] Users can substitute tap water for the Mixing/Buffer Solution but the gas release will not be as efficient. Contact the manufacturer for specific directions.] EthylBloc® is more effective under warm temperature conditions, 55° to 75°F, (13° to 24° C). Longer treatment times are required for plants held under temperatures below 55°F, (13° C).

### **Flowers And Plants**

EthylBloc® treatment benefits many flowers and plants such as:

Achillea, Aconitum, Agapanthus, Alchemilla, Allium, Alstroemeria, Alyssum, Aphelandra, Aquilegia, Asclepias, Astrantia, Asparagus Fern, Azalea, Begonia, Bouvardia, Brassia (*Schefflera*), Brodiaea (*Triteleia*), Calathea, Campanula, Carnation, Celosia, Centaurea, Chamaedorea, Chelone, Coleus, Cordyline, Cymbidium, Crocosmia (*Montbretia*), Daucus (Queen Annes Lace), Delphinium, Dendrobium, Dianthus, Dicentra, Dizygotheca, Doronicum, Echium, Eremurus, Eustoma (*Lisianthus*), Ficus, Freesia, Fuchsia, Geranium, Gladiolus, Godetia, Gypsophila, Hibiscus, Ilex (Holly), Impatiens, Ixia, Kalanchoe, Kniphofia, Lavatera, Lily, Lysimachia, Miniature Carnation, Monkshood, Pelargonium, Petunia, Philodendron, Phlox, Physostegia, Poinsettia, Radermachera, Rose, Rudbeckia, Salvia, Saponaria, Scabiosa, Silene, Snapdragon, Solidaster, Stock, Streptocarpus, Sweet William, Trachelium, Trollius, Veronica, Wax Flower, and Zygocactus.

To realize maximum benefits, treat plants whether or not they may have been previously treated with EthylBloc® or another anti-ethylene product. Shipments already treated with EthylBloc® do not have to be retreated, however, retreating is not harmful and can even be beneficial. Some species that would likely benefit from additional applications include those with more than one flower per stem (i.e. snapdragons, delphiniums, miniature carnations and alstroemeria) and flowers at different stages of development on the same plant (i.e. geraniums, impatiens, and azaleas).

#### TREATMENT INSTRUCTIONS

1. Calculate the treatment volume by measuring the length, width and height of the treatment area in feet or meters. Multiply these three numbers together to obtain the volume of the room/area in cubic feet or cubic meters. For example, if a room is 4 feet wide, 5 feet long and 5 feet high, the volume equals 100 cubic feet.
2. Wear all Personal Protective Equipment (PPE) required under Precautionary Statements.
3. Use a plastic mixing container large enough to hold the EthylBloc® and Mixing/Buffer Solution. A plastic pail works well for larger applications, a plastic bowl or similar container for smaller applications.
4. First add Mixing/Buffer Solution to the mixing container. Then add the EthylBloc® powder. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the tables/boxes below. [or {For Water Soluble Packets} First add Mixing/Buffer Solution to the mixing container. Then add the water soluble packet of EthylBloc® to the mixing container, making sure the water soluble packet is covered. The amounts of EthylBloc® and



Mixing/Buffer Solution are specified in the tables/boxes below.]

5. Following the addition of EthylBloc® to the Mixing/Buffer Solution, leave the treatment area immediately. Make sure the area is sufficiently sealed. See following application sections for details.
6. POSTING: Signs should be posted on all potential entry points during EthylBloc® treatment (for at least four hours or as otherwise recommended in the Directions for Use). Signs should state "CAUTION. Do not enter area. EthylBloc® treatment underway." Posting is suggested as a means of ensuring optimal effectiveness of EthylBloc®.
7. After the treatment period ends (see below tables/boxes for specified treatment periods), ventilate treated areas with outside air before reentry.
8. Remaining treatment solution can be disposed of on site or at an approved waste disposal facility.

## SPECIFIC TREATMENT PERIODS

**TREATMENT CONDITIONS:** 55 – 75 °F, 4 to 8 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 13                  |
| 1 Green Scoop             | 2 Tbsp                         | 100                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 2500                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.4                   |
| 1 Green Scoop             | 30 ml                     | 3                     |
| 38 g Water Soluble Packet | 750 ml                    | 75                    |
| 75 g Water Soluble Packet | 1500 ml                   | 150                   |

**TREATMENT CONDITIONS:** 55 to 75 °F, minimum 10 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 200 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 26                  |
| 1 Green Scoop             | 2 Tbsp                         | 200                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 5000                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 10000               |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.8                   |
| 1 Green Scoop             | 30 ml                     | 6                     |
| 38 g Water Soluble Packet | 750 ml                    | 150                   |
| 75 g Water Soluble Packet | 1500 ml                   | 300                   |

**TREATMENT CONDITIONS:** 35 to 55 °F, minimum 10 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1.5 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Feet to Treat |
|---------------------------|---------------------------|---------------------|
| 1 White Scoop             | 1.5 tsp                   | 13                  |
| 1 Green Scoop             | 3 Tbsp                    | 100                 |
| 38 g Water Soluble Packet | 37 fl oz or 4 2/3 cups    | 2500                |
| 75 g Water Soluble Packet | 75 fl oz or 9 1/3 cups    | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 7 ml                      | 0.4                   |
| 1 Green Scoop             | 45 ml                     | 3                     |
| 38 g Water Soluble Packet | 1125 ml                   | 75                    |
| 75 g Water Soluble Packet | 2250 ml                   | 150                   |



**Measurements:**

WHITE SCOOP = 0.2 grams EthylBloc® powder

GREEN SCOOP = 1.5 grams EthylBloc® powder

1 teaspoon = 1 tsp = 5 ml

1 Tablespoon = 1 Tbsp = 3 tsp = ½ fl oz

1 fl oz = 2 Tbsp = 30 ml

1 cup = 8 fl oz = 240 ml

38 gram Water Soluble Packet will treat a 20 ft truck container

75 gram Water Soluble Packet will treat a 40 ft truck container

**APPLICATION IN GREENHOUSES PRIOR TO HARVEST**

Fresh cut flowers and bedding, potted flowering, nursery and foliage plants can be treated in the greenhouse just prior to being harvested.

1. The greenhouse must be tightly constructed. Plastic covered houses (especially "double-poly") are generally tighter than fiberglass or glass covered ones.
2. Sections of greenhouses can be enclosed with plastic to make the treatment area smaller, as long as it is sealed sufficiently to prevent the gas from escaping. Excessive leakage reduces effectiveness of EthylBloc®.
3. Make sure all greenhouse vents are closed. Night treatment is recommended mainly because vent closing is more realistic and treatment times can be longer.
4. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
5. All greenhouse treatments should be done at temperatures greater than 55°F (13° C).
6. When calculating treatment volumes, use 2 of the height measured at the ridge/peak for the height measurement. If a greenhouse is 25 feet wide, 100 feet long and 10 feet high, the approximate volume equals  $25 \times 100 \times 10/2 = 12,500$  cubic feet.
7. Follow steps under Treatment Instructions.

## **APPLICATION IN ENCLOSED AREAS SUCH AS: HOLDING/STORAGE ROOMS, COOLERS, AND TRUCK TRAILERS**

Plants being held in enclosed areas can be easily treated with EthylBloc®. For example, non-boxed sleeved potted plants and cut flowers (held dry or in solution), or boxed plants and cut flowers with the lids and/or precooling vents completely open and directly exposed to the surrounding atmosphere can be treated. Bedding or potted plants on movable racks are also easily treated.

### **Typical treatment areas**

- Retail and wholesale florist coolers including walk-in, storage and/or walk-in/storage combinations;
- Delivery trucks or vans, truck trailers, inter-modal containers, regardless of their size/volume;
- Any room in a building that can be isolated, sealed and aerated/vented to the outside after treatment.

1. Treatment areas should be checked for gas leakage. Excessive leakage reduces effectiveness of EthylBloc®.
2. If needed, use plastic liners, tape and/or other products and procedures to make enclosed areas more gas/air tight
3. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
- 4 Temperatures should be between 35° and 75° F (13° and 24° C).
5. Follow steps under Treatment Instructions.

## **APPLICATION IN AREAS SPECIFICALLY BUILT FOR ETHYLBLOC TREATMENT**

**General EthylBloc® Treatment Chamber.** It might be appropriate to construct an area to be used solely for EthylBloc® treatment. Constructing such specific EthylBloc® treatment areas has proven to be an effective way of using EthylBloc®. This maximizes EthylBloc® effectiveness and reduces costs by requiring less product to treat a given number of plant units.

While this treatment area could be built using a number of gas impermeable materials, 4.0 to 6.0 mil polyethylene sheeting works well. Just make sure the unit seals properly.

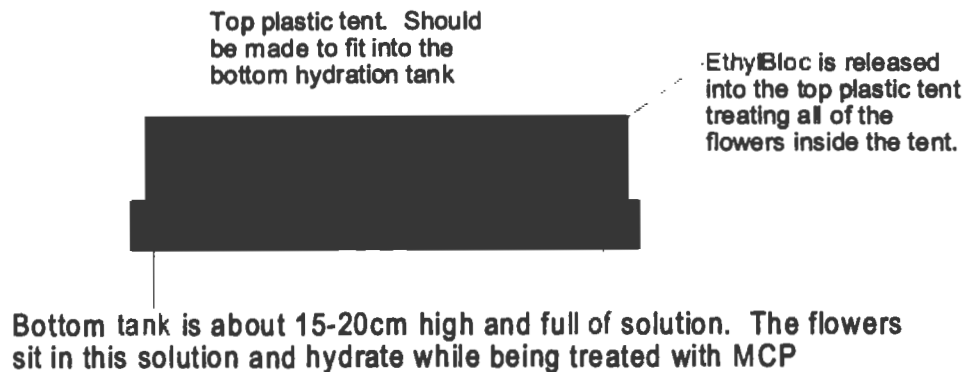


One way to help ensure a good seal where the plastic comes in contact with the flooring is to use hydration solution. The treatment unit base is submerged in a trough of hydration solution a few inches deep thus making a good seal where gas cannot escape.

To use such a treatment area, follow the treatment instructions adjusting for treatment volume and temperatures.

**Cut Flower Hydration EthylBloc® Treatment Chamber.** The top of the chamber can be made of 4.0 to 6.0 mil polyethylene sheeting and a wooden frame, or a single plastic piece that can fit into the bottom hydration tank, or something similar. The bottom tank can be any size tub that is capable of holding hydration solution and flowers. See drawing below.

**Figure 1**



[[Optional text for similar text above in box] Bottom tank is about 6 to 8 inches (15-20 cm) high and full of hydration solution. The flowers sit in this solution and hydrate while being treated with EthylBloc®.]

Place the flowers in bunches or in buckets in the bottom tank. Place the top plastic tent over the bottom holding tank. The tent's bottom edges must be able to be submerged into the hydration solution in the bottom holding tank to insure a seal. Follow Treatment Instructions making sure the EthylBloc® mixture remains separate from the hydration solution throughout the treatment.

**WARRANTY** AgroFresh, Inc, warrants that this material conforms to the chemical description on the label. AgroFresh, Inc, neither makes nor authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, express or implied, concerning this material. The maximum liability for breach of this warranty shall not exceed the purchase price of this product. AgroFresh, Inc's maximum liability for breach of this warranty shall not exceed the purchase price of the product. Buyer and user acknowledge and assume all risks and liabilities resulting from the handling, storage and use of this material, whether or not in accordance with directions.





|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>United States</b><br><b>Environmental Protection Agency</b><br>Washington, DC 20460                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                        | <input type="checkbox"/> Registration<br><input checked="" type="checkbox"/> <b>Amendment</b><br><input type="checkbox"/> Other                                                          | OPP Identifier Number                                                                                                                                                                                                       |
| <b>Application for Pesticide - Section I</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| 1. Company/Product Number<br>71297-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                        | 2. EPA Product Manager<br>Driss Benmhend                                                                                                                                                 |                                                                                                                                                                                                                             |
| 4. Company/Product (Name)<br>EthylBloc Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                        | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted                                                                               |                                                                                                                                                                                                                             |
| 5. Name and Address of Applicant (Include ZIP Code)<br>AgroFresh Inc.<br>100 Independence Mall West<br>Philadelphia, PA 19106<br><br><input type="checkbox"/> Check if this is a new address                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                        | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br><br>Product Name _____ |                                                                                                                                                                                                                             |
| <b>Section - II</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| <input type="checkbox"/> Amendment - Explain below. <span style="margin-left: 200px;"><input type="checkbox"/> Final printed labels in response to Agency letter dated _____</span><br><input checked="" type="checkbox"/> Resubmission in response to Agency letter dated _____ <span style="margin-left: 200px;"><input type="checkbox"/> "Me Too" Application.</span><br><input type="checkbox"/> Notification - Explain below. <span style="margin-left: 200px;"><input type="checkbox"/> Other - Explain below.</span> |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| <b>Explanation:</b> Use additional page(s) if necessary. (For section I and Section II.)<br>Response to July 12, 2004 letter from Sheryl Reilly with recommended changes to the draft EthylBloc technology label. The recommended changes have been incorporated, and a revised label is being submitted as part of this resubmission.                                                                                                                                                                                      |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| <b>Section - III</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| 1. Material This Product Will Be Packaged In:                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                                                                                                                                                                                                                                                                                                                                                                                                         | Unit Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No<br>If "Yes" Unit Packaging wgt. _____ No. per container _____ | Water Soluble Packaging<br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes" Package wgt. _____ No. per container _____                                 | 2. Type of Container<br><input checked="" type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |
| 3. Location of Net Contents Information<br><input checked="" type="checkbox"/> Label <input type="checkbox"/> Container                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                        | 4. Size(s) Retail Container<br>1.34 oz or 2.6 oz or 3.5 oz                                                                                                                               |                                                                                                                                                                                                                             |
| 5. Location of Label Directions<br><input type="checkbox"/> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                        | 6. Manner in Which Label is Affixed to Product<br><input checked="" type="checkbox"/> Lithograph Paper glued Stenciled <input type="checkbox"/> Other _____                              |                                                                                                                                                                                                                             |
| <b>Section - IV</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| Name<br>Robert H. Larkin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                        | Title<br>President, Regulatory Solutions, LL                                                                                                                                             | Telephone No. (Include Area Code)<br>215-284-5702                                                                                                                                                                           |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.                                                                                                                                                                                                                                          |                                                                                                                                                        |                                                                                                                                                                                          | 5. Date Application Received<br>(Stamped)<br><br><br><br><br><br><br>                                                                                                                                                       |
| 2. Signature<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                        | 3. Title<br>President, Regulatory Solutions                                                                                                                                              |                                                                                                                                                                                                                             |
| 4. Typed Name<br>Robert H. Larkin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                        | 5. Date<br>August 6, 2004                                                                                                                                                                |                                                                                                                                                                                                                             |

August 6, 2004

Document Processing Desk (AMEND)  
Office Of Pesticide Programs 7504C  
U.S. Environmental Protection Agency  
Room 266A Crystal Mall 2  
1801 S. Bell Street  
Arlington, VA 22202

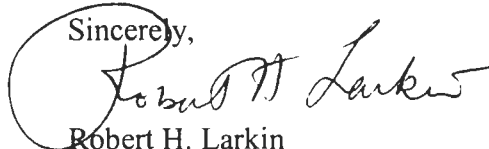
Attention: Mari Duggard

Re: EthylBloc™ Technology  
EPA Registration Number 71297-1  
Label Amendment Application To Amend First Aid Statements  
Response To Sheryl Reilly Letter dated July 12, 2004

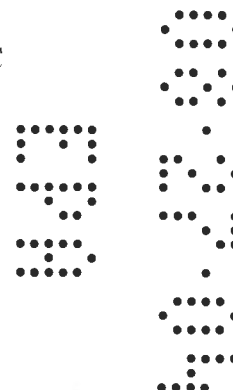
NFFS  
T

Enclosed are three copies of the draft label for EthylBloc™ Technology amended as per the recommendations in Dr. Sheryl Reilly's letter of July 12, 2004. The changes to the originally submitted label are highlighted in red. Also enclosed with this resubmission is a completed application form 8570-1. Please let me know if you have any questions or need any additional information for approval of this amended label.

Sincerely,



Robert H. Larkin  
President  
Regulatory Solutions, LLC



**AgroFresh**



Draft

(Container label first page only; insert label all pages)

# EthylBloc® Technology

EthylBloc® technology is a powder that, when mixed with a Mixing/Buffer solution or water, releases a gas to extend the life and usefulness of many fresh cut flowers, potted flowers, bedding, nursery and foliage plants. Plants are treated with this gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. This product is intended for use only on ornamental, non-food crops. Do not use outdoors or in other non-enclosed areas.

**Active Ingredient:** 1-Methylcyclopropene ..... 0.14%  
**Other Ingredients:** ..... 99.86%  
**Total:** ..... 100.00%

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

## FIRST AID

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **For information on this product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.**

**Net Contents:** 1.34 oz. [38g (water soluble packet), 2.6 oz. [75 g (water soluble packet)], and 3.5 oz. [100 g bottle]

EPA Registration No.: 71297-1  
EPA Establishment No.: 32258-SC-001  
U.S. Patent No. 5,518,988

EthylBloc® is a registered trademark of Rohm and Haas Company

AgroFresh Inc.  
A Fully Owned Subsidiary of Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA 10106  
215 592-3000

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and mixers of this product must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Protective eyewear (goggles or face shield).
- Rubber gloves.
- As a general precaution when exposed to a gas, for activities in enclosed areas wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- Applicators and handlers must follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.



## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, <sup>nurseries</sup> and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in the box only apply to uses of this product that are covered by the Worker Protection Standard. <sup>notification to workers</sup>

Do not enter or allow worker entry into treated areas prior to venting the volatile active ingredient from the treatment area.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, prior to venting the volatile active ingredient from the treatment area is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N,R,P, or HE prefilter.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

EthylBloc® can extend the life and usefulness of many fresh cut flowers and potted flowers, bedding, nursery and foliage plants. It works by inhibiting the negative effects of ethylene and thus prevents or reduces premature flower death, leaf and/or flower fall, and leaf yellowing.

EthylBloc® is specifically designed to be used by all levels of the floral and nursery industries, including growers, shippers, wholesalers, bouquet manufacturers, mail-order houses and retailers (such as florists, garden centers, nurseries and mass-market outlets). EthylBloc® is very easy to use with almost no labor costs.

EthylBloc® can be used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. It comes with two scoops for easy measuring and the proper Mixing/Buffer Solution. [Optional: EthylBloc® is in a water soluble package for easy use with the proper Buffer (mixing) solution.] The Mixing/Buffer Solution is used to facilitate gas release. [Optional: Users can substitute tap water for the Mixing/Buffer Solution but the gas release will not be as efficient. Contact the manufacturer for specific directions.] EthylBloc® is more effective under warm temperature conditions, 55° to 75°F, (13° to 24° C). Longer treatment times are required for



plants held under temperatures below 55°F, (13° C).

## Flowers And Plants

EthylBloc® treatment benefits many flowers and plants such as:

Achillea, Aconitum, Agapanthus, Alchemilla, Allium, Alstroemeria, Alyssum, Aphelandra, Aquilegia, Asclepias, Astrantia, Asparagus Fern, Azalea, Begonia, Bouvardia, Brassia (*Schefflera*), Brodiaea (*Triteleia*), Calathea, Campanula, Carnation, Celosia, Centaurea, Chamaedorea, Chelone, Coleus, Cordyline, Cymbidium, Crocosmia (*Montbretia*), Daucus (Queen Annes Lace), Delphinium, Dendrobium, Dianthus, Dicentra, Dizygotheca, Doronicum, Echium, Eremurus, Eustoma (*Lisianthus*), Ficus, Freesia, Fuchsia, Geranium, Gladiolus, Godetia, Gypsophila, Hibiscus, Ilex (Holly), Impatiens, Ixia, Kalanchoe, Kniphofia, Lavatera, Lily, Lysimachia, Miniature Carnation, Monkshood, Pelargonium, Petunia, Philodendron, Phlox, Physostegia, Poinsettia, Radermachera, Rose, Rudbeckia, Salvia, Saponaria, Scabiosa, Silene, Snapdragon, Solidaster, Stock, Streptocarpus, Sweet William, Trachelium, Trollius, Veronica, Wax Flower, and Zygocactus.

To realize maximum benefits, **treat** plants whether or not they may have been previously treated with EthylBloc® or another anti-ethylene product. Shipments already treated with EthylBloc® do not have to be retreated, however, retreating is not harmful and can even be beneficial. Some species that would likely benefit from additional applications include those with more than one flower per stem (i.e. snapdragons, delphiniums, miniature carnations and alstroemeria) and flowers at different stages of development on the same plant (i.e. geraniums, impatiens, and azaleas).

### TREATMENT INSTRUCTIONS

1. Calculate the treatment volume by measuring the length, width and height of the treatment area in feet or meters. Multiply these three numbers together to obtain the volume of the room/area in cubic feet or cubic meters. For example, if a room is 4 feet wide, 5 feet long and 5 feet high, the volume equals 100 cubic feet.
2. Wear all Personal Protective Equipment (PPE) required under Precautionary Statements.
3. Use a plastic mixing container large enough to hold the EthylBloc® and Mixing/Buffer Solution. A plastic pail works well for larger applications, a plastic bowl or similar container for smaller applications.
4. First add Mixing/Buffer Solution to the mixing container. Then add the

EthylBloc® powder. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the tables/boxes below. [or {For Water Soluble Packets} First add Mixing/Buffer Solution to the mixing container. Then add the water soluble packet of EthylBloc® to the mixing container, making sure the water soluble packet is covered. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the tables/boxes below.]

5. Following the addition of EthylBloc® to the Mixing/Buffer Solution, leave the treatment area immediately. Make sure the area is sufficiently sealed. See following application sections for details.
6. POSTING: Signs should be posted on all potential entry points during EthylBloc® treatment (for at least four hours or as otherwise recommended in the Directions for Use). Signs should state "CAUTION. Do not enter area. EthylBloc® treatment underway." Posting is suggested as a means of ensuring optimal effectiveness of EthylBloc®.
7. After the treatment period ends (see below tables/boxes for specified treatment periods), ventilate treated areas with outside air before reentry.
8. Remaining treatment solution can be disposed of on site or at an approved waste disposal facility.



## SPECIFIC TREATMENT PERIODS

**TREATMENT CONDITIONS:** 55 – 75 °F, 4 to 8 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 13                  |
| 1 Green Scoop             | 2 Tbsp                         | 100                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 2500                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.4                   |
| 1 Green Scoop             | 30 ml                     | 3                     |
| 38 g Water Soluble Packet | 750 ml                    | 75                    |
| 75 g Water Soluble Packet | 1500 ml                   | 150                   |

**TREATMENT CONDITIONS:** 55 to 75 °F, minimum 10 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 200 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 26                  |
| 1 Green Scoop             | 2 Tbsp                         | 200                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 5000                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 10000               |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.8                   |
| 1 Green Scoop             | 30 ml                     | 6                     |
| 38 g Water Soluble Packet | 750 ml                    | 150                   |
| 75 g Water Soluble Packet | 1500 ml                   | 300                   |

**TREATMENT CONDITIONS:** 35 to 55 °F, minimum 10 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1.5 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Feet to Treat |
|---------------------------|---------------------------|---------------------|
| 1 White Scoop             | 1.5 tsp                   | 13                  |
| 1 Green Scoop             | 3 Tbsp                    | 100                 |
| 38 g Water Soluble Packet | 37 fl oz or 4 2/3 cups    | 2500                |
| 75 g Water Soluble Packet | 75 fl oz or 9 1/3 cups    | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 7 ml                      | 0.4                   |
| 1 Green Scoop             | 45 ml                     | 3                     |
| 38 g Water Soluble Packet | 1125 ml                   | 75                    |
| 75 g Water Soluble Packet | 2250 ml                   | 150                   |

**Measurements:**

WHITE SCOOP = 0.2 grams EthylBloc® powder

GREEN SCOOP = 1.5 grams EthylBloc® powder

1 teaspoon = 1 tsp = 5 ml

1 Tablespoon = 1 Tbsp = 3 tsp = ½ fl oz

1 fl oz = 2 Tbsp = 30 ml

1 cup = 8 fl oz = 240 ml

38 gram Water Soluble Packet will treat a 20 ft truck container

75 gram Water Soluble Packet will treat a 40 ft truck container

**APPLICATION IN GREENHOUSES PRIOR TO HARVEST**

Fresh cut flowers and bedding, potted flowering, nursery and foliage plants can be treated in the greenhouse just prior to being harvested.

1. The greenhouse must be tightly constructed. Plastic covered houses (especially "double-poly") are generally tighter than fiberglass or glass covered ones.
2. Sections of greenhouses can be enclosed with plastic to make the treatment area smaller, as long as it is sealed sufficiently to prevent the gas from escaping. Excessive leakage reduces effectiveness of EthylBloc®.
3. Make sure all greenhouse vents are closed. Night treatment is recommended mainly because vent closing is more realistic and treatment times can be longer.
4. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
5. All greenhouse treatments should be done at temperatures greater than 55°F (13° C).
6. When calculating treatment volumes, use 2 of the height measured at the ridge/peak for the height measurement. If a greenhouse is 25 feet wide, 100 feet long and 10 feet high, the approximate volume equals  $25 \times 100 \times 10/2 = 12,500$  cubic feet.
7. Follow steps under Treatment Instructions.



## APPLICATION IN ENCLOSED AREAS SUCH AS: HOLDING/STORAGE ROOMS, COOLERS, AND TRUCK TRAILERS

Plants being held in enclosed areas can be easily treated with EthylBloc®. For example, non-boxed sleeved potted plants and cut flowers (held dry or in solution), or boxed plants and cut flowers with the lids and/or precooling vents completely open and directly exposed to the surrounding atmosphere can be treated. Bedding or potted plants on movable racks are also easily treated.

### Typical treatment areas

- Retail and wholesale florist coolers including walk-in, storage and/or walk-in/storage combinations;
- Delivery trucks or vans, truck trailers, inter-modal containers, regardless of their size/volume;
- Any room in a building that can be isolated, sealed and aerated/vented to the outside after treatment.

1. Treatment areas should be checked for gas leakage. Excessive leakage reduces effectiveness of EthylBloc®.
2. If needed, use plastic liners, tape and/or other products and procedures to make enclosed areas more gas/air tight
3. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
4. Temperatures should be between 35° and 75° F (13° and 24° C).
5. Follow steps under Treatment Instructions.

## APPLICATION IN AREAS SPECIFICALLY BUILT FOR ETHYLBLOC TREATMENT

**General EthylBloc® Treatment Chamber.** It might be appropriate to construct an area to be used solely for EthylBloc® treatment. Constructing such specific EthylBloc® treatment areas has proven to be an effective way of using EthylBloc®. This maximizes EthylBloc® effectiveness and reduces costs by requiring less product to treat a given number of plant units.

While this treatment area could be built using a number of gas impermeable materials, 4.0 to 6.0 mil polyethylene sheeting works well. Just make sure the

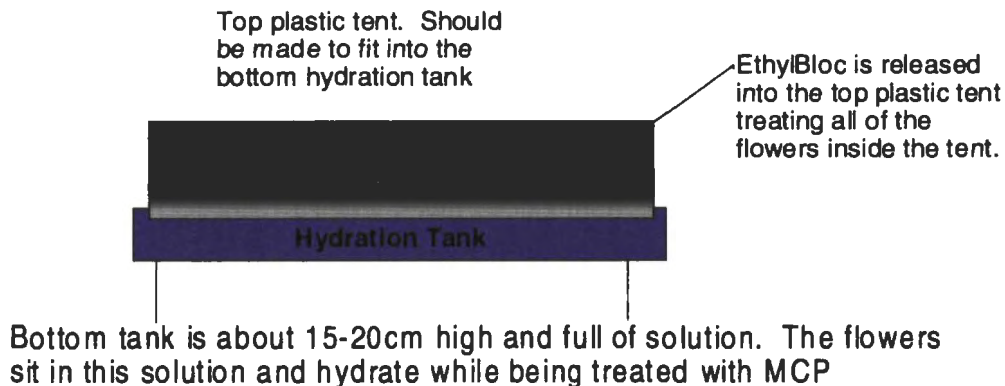
unit seals properly.

One way to help ensure a good seal where the plastic comes in contact with the flooring is to use hydration solution. The treatment unit base is submerged in a trough of hydration solution a few inches deep thus making a good seal where gas cannot escape.

To use such a treatment area, follow the treatment instructions adjusting for treatment volume and temperatures.

**Cut Flower Hydration EthylBloc® Treatment Chamber.** The top of the chamber can be made of 4.0 to 6.0 mil polyethylene sheeting and a wooden frame, or a single plastic piece that can fit into the bottom hydration tank, or something similar. The bottom tank can be any size tub that is capable of holding hydration solution and flowers. See drawing below.

Figure 1



[{Optional text for similar text above in box} Bottom tank is about 6 to 8 inches (15-20 cm) high and full of hydration solution. The flowers sit in this solution and hydrate while being treated with EthylBloc®.]

Place the flowers in bunches or in buckets in the bottom tank. Place the top plastic tent over the bottom holding tank. The tent's bottom edges must be able to be submerged into the hydration solution in the bottom holding tank to insure a seal. Follow Treatment Instructions making sure the EthylBloc® mixture remains separate from the hydration solution throughout the treatment.



**WARRANTY** AgroFresh, Inc, warrants that this material conforms to the chemical description on the label. AgroFresh, Inc, neither makes nor authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, express or implied, concerning this material. The maximum liability for breach of this warranty shall not exceed the purchase price of this product. AgroFresh, Inc's maximum liability for breach of this warranty shall not exceed the purchase price of the product. Buyer and user acknowledge and assume all risks and liabilities resulting from the handling, storage and use of this material, whether or not in accordance with directions.

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

|        |     |
|--------|-----|
| 753151 | 300 |
| n/a    | 12  |

Robert H. Larkin  
 Agro Fresh Inc.  
 c/o Rohm and Haas Company  
 100 Independence Mall West  
 Philadelphia, PA 19105

JUL 12 2004

Subject: Label Amendment Application to update First Aid statement per  
 PRN 2001-1 dated: 27 Jan 2004  
 Product Name: Ethylbloc  
 EPA Registration Number: 71297-1

Dear Mr. Larkin:

The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(A), cannot be approved until revisions are made. The changes that need to be made are annotated on the enclosed draft label and described below.

(1) Net Contents/Address:

- Please add the Net Contents or Weight of product to the label.
- Please include full company mailing address

See label annotations page 1

(2) First Aid Statements:

- Remove "by mouth" in 'If Swallowed' instructions.

• Add: "For information on this product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378."

See label annotations page 1

(3) Directions for Use:

Please revise this section according to PR Notice 2000-5;

- a. "To realize maximum benefits, treat plants whether or not..."
- b. "The amount of EthylBloc and Mixing/ Buffer Solution are specified in the tables/ boxes below."

See label annotations pages 4 and 5

CONCURRENCES

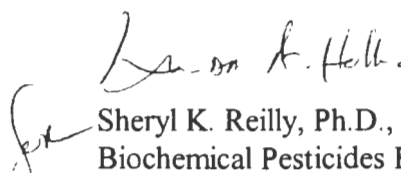
|         |          |  |  |  |  |  |  |
|---------|----------|--|--|--|--|--|--|
| SYMBOL  | 75110    |  |  |  |  |  |  |
| SURNAME | DUGGARD  |  |  |  |  |  |  |
| DATE    | 8 JUL 04 |  |  |  |  |  |  |

(4) Worker Protection Standard (WPS)

Your product was mistakenly registered without WPS language. After reviewing the label for the amendment, it was determined that your product falls within the scope of the Worker Protection Standard and therefore the label must be revised to contain the appropriate verbiage for WPS. Refer to 40 CFR 170.1, PR Notices 93-7 & -11, and the LRM 3<sup>rd</sup> edition Chapter 10.

We apologize for the oversight and any inconvenience this may cause. Please revise and resubmit your label. If you have questions, please contact Mari Duggard, at 703-308-0028, or by e-mail at [duggard.mari@epa.gov](mailto:duggard.mari@epa.gov).

Sincerely,

  
Sheryl K. Reilly, Ph.D., Chief  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511C)

Enclosures: Copy of draft label with comments



17093-1  
-11

\* CORRECTIONS + SUGGESTIONS  
IN BOTH BLACK + RED  
INK ON COPY.

Draft

(Container label first page only; insert label all pages)

## EthylBloc® Technology

EthylBloc® technology is a powder that, when mixed with a Mixing/Buffer solution or water, releases a gas to extend the life and usefulness of many fresh cut flowers, potted flowers, bedding, nursery and foliage plants. Plants are treated with this gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. This product is intended for use only on ornamental non-food crops. Do not use outdoors or in other non-enclosed areas.

Active Ingredient: 1-Methylcyclopropene ..... 0.14%  
Other Ingredients: ..... 99.86%  
Total: ..... 100.00%

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

### FIRST AID

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

EPA Registration No.: 71297-1  
EPA Establishment No.: 32258-SC-001

EthylBloc® Technology  
Last label revision June 21, 2000  
Page 1 of 10

U.S. Patent No. 5,518,988

AgroFresh Inc. is a fully-owned subsidiary of Rohm and Haas Company

EthylBloc® is a registered trademark of Rohm and Haas Company

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and mixers of this product must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Protective eyewear (~~goggles or face shield~~). *Keep the*
- Rubber gloves.
- As a general precaution when exposed to a gas, for activities in enclosed areas wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- Applicators and handlers must follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

EthylBloc® can extend the life and usefulness of many fresh cut flowers and potted flowers, bedding, nursery and foliage plants. It works by inhibiting the negative effects of ethylene and thus prevents or reduces premature flower death, leaf and/or flower fall, and leaf yellowing.

EthylBloc® is specifically designed to be used by all levels of the floral and



nursery industries, including growers, shippers, wholesalers, bouquet manufacturers, mail-order houses and retailers (such as florists, garden centers, nurseries and mass-market outlets). EthylBloc® is very easy to use with almost no labor costs.

EthylBloc® can be used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. It comes with two scoops for easy measuring and the proper Mixing/Buffer Solution. [Optional: EthylBloc® is in a water soluble package for easy use with the proper Buffer (mixing) solution.] The Mixing/Buffer Solution is used to facilitate gas release. [Optional] Users can substitute tap water for the Mixing/Buffer Solution but the gas release will not be as efficient. Contact the manufacturer for specific directions.] EthylBloc® is more effective under warm temperature conditions, 55° to 75°F, (13° to 24° C). Longer treatment times are required for plants held under temperatures below 55°F, (13° C).

## Flowers And Plants

EthylBloc® treatment benefits many flowers and plants such as:

Achillea, Aconitum, Agapanthus, Alchemilla, Allium, Alstroemeria, Alyssum, Aphelandra, Aquilegia, Asclepias, Astrantia, Asparagus Fern, Azalea, Begonia, Bouvardia, Brassia (*Schefflera*), Brodiaea (*Triteleia*), Calathea, Campanula, Carnation, Celosia, Centaurea, Chamaedorea, Chelone, Coleus, Cordyline, Cymbidium, Crocosmia (*Montbretia*), Daucus (Queen Annes Lace), Delphinium, Dendrobium, Dianthus, Dicentra, Dizygotheca, Doronicum, Echium, Eremurus, Eustoma (*Lisianthus*), Ficus, Freesia, Fuchsia, Geranium, Gladiolus, Godetia, Gypsophila, Hibiscus, Ilex (Holly), Impatiens, Ixia, Kalanchoe, Kniphofia, Lavatera, Lily, Lysimachia, Miniature Carnation, Monkshood, Pelargonium, Petunia, Philodendron, Phlox, Physostegia, Poinsettia, Radermachera, Rose, Rudbeckia, Salvia, Saponaria, Scabiosa, Silene, Snapdragon, Solidaster, Stock, Streptocarpus, Sweet William, Trachelium, Trollius, Veronica, Wax Flower, and Zygocactus.

To realize maximum benefits, <sup>treat plants</sup> ~~plants should be treated~~ whether or not they may have been previously treated with EthylBloc® or another anti-ethylene product. Shipments already treated with EthylBloc® do not have to be retreated, however, retreating is not harmful and can even be beneficial. Some species that would likely benefit from additional applications include those with more than one flower per stem (i.e. snapdragons, delphiniums, miniature carnations and alstroemeria) and flowers at different stages of development on the same plant (i.e. geraniums, impatiens, and azaleas).

### TREATMENT INSTRUCTIONS

1. Calculate the treatment volume by measuring the length, width and height of the treatment area in feet or meters. Multiply these three numbers together to obtain the volume of the room/area in cubic feet or cubic meters. For example, if a room is 4 feet wide, 5 feet long and 5 feet high, the volume equals 100 cubic feet.
2. Wear all Personal Protective Equipment (PPE) required under Precautionary Statements.
3. Use a plastic mixing container large enough to hold the EthylBloc® and Mixing/Buffer Solution. A plastic pail works well for larger applications, a plastic bowl or similar container for smaller applications.
4. First add Mixing/Buffer Solution to the mixing container. Then add the EthylBloc® powder. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the ~~following~~ tables/boxes. *below* [or {For Water Soluble Packets} First add Mixing/Buffer Solution to the mixing container. Then add the water soluble packet of EthylBloc® to the mixing container, making sure the water soluble packet is covered. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the ~~following~~ tables/boxes. *below* ]
5. Following the addition of EthylBloc® to the Mixing/Buffer Solution, leave the treatment area immediately. Make sure the area is sufficiently sealed. See following application sections for details.
6. POSTING: Signs should be posted on all potential entry points during EthylBloc® treatment (for at least four hours or as otherwise recommended in the Directions for Use). Signs should state "CAUTION. Do not enter area. EthylBloc® treatment underway." Posting is suggested as a means of ensuring optimal effectiveness of EthylBloc®.
7. After the treatment period ends (see below tables/boxes for specified treatment periods), ventilate treated areas with outside air before reentry.
8. Remaining treatment solution can be disposed of on site or at an approved waste disposal facility.

## SPECIFIC TREATMENT PERIODS

**TREATMENT CONDITIONS: 55 – 75 °F, 4 to 8 hours**

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 13                  |
| 1 Green Scoop             | 2 Tbsp                         | 100                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 2500                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.4                   |
| 1 Green Scoop             | 30 ml                     | 3                     |
| 38 g Water Soluble Packet | 750 ml                    | 75                    |
| 75 g Water Soluble Packet | 1500 ml                   | 150                   |

**TREATMENT CONDITIONS: 55 to 75 °F, minimum 10 hours**

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 200 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 26                  |
| 1 Green Scoop             | 2 Tbsp                         | 200                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 5000                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 10000               |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.8                   |
| 1 Green Scoop             | 30 ml                     | 6                     |
| 38 g Water Soluble Packet | 750 ml                    | 150                   |
| 75 g Water Soluble Packet | 1500 ml                   | 300                   |

**TREATMENT CONDITIONS: 35 to 55 °F, minimum 10 hours**

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1.5 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Feet to Treat |
|---------------------------|---------------------------|---------------------|
| 1 White Scoop             | 1.5 tsp                   | 13                  |
| 1 Green Scoop             | 3 Tbsp                    | 100                 |
| 38 g Water Soluble Packet | 37 fl oz or 4 2/3 cups    | 2500                |
| 75 g Water Soluble Packet | 75 fl oz or 9 1/3 cups    | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 7 ml                      | 0.4                   |
| 1 Green Scoop             | 45 ml                     | 3                     |
| 38 g Water Soluble Packet | 1125 ml                   | 75                    |
| 75 g Water Soluble Packet | 2250 ml                   | 150                   |



**Measurements:**

WHITE SCOOP = 0.2 grams EthylBloc® powder

GREEN SCOOP = 1.5 grams EthylBloc® powder

1 teaspoon = 1 tsp = 5 ml

1 Tablespoon = 1 Tbsp = 3 tsp = ½ fl oz

1 fl oz = 2 Tbsp = 30 ml

1 cup = 8 fl oz = 240 ml

38 gram Water Soluble Packet will treat a 20 ft truck container

75 gram Water Soluble Packet will treat a 40 ft truck container

**APPLICATION IN GREENHOUSES PRIOR TO HARVEST**

Fresh cut flowers and bedding, potted flowering, nursery and foliage plants can be treated in the greenhouse just prior to being harvested.

1. The greenhouse must be tightly constructed. Plastic covered houses (especially "double-poly") are generally tighter than fiberglass or glass covered ones.
2. Sections of greenhouses can be enclosed with plastic to make the treatment area smaller, as long as it is sealed sufficiently to prevent the gas from escaping. Excessive leakage reduces effectiveness of EthylBloc®.
3. Make sure all greenhouse vents are closed. Night treatment is recommended mainly because vent closing is more realistic and treatment times can be longer.
4. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
5. All greenhouse treatments should be done at temperatures greater than 55°F (13° C).
6. When calculating treatment volumes, use 2 of the height measured at the ridge/peak for the height measurement. If a greenhouse is 25 feet wide, 100 feet long and 10 feet high, the approximate volume equals  $25 \times 100 \times 10/2 = 12,500$  cubic feet.
7. Follow steps under Treatment Instructions.

## **APPLICATION IN ENCLOSED AREAS SUCH AS: HOLDING/STORAGE ROOMS, COOLERS, AND TRUCK TRAILERS**

Plants being held in enclosed areas can be easily treated with EthylBloc®. For example, non-boxed sleeved potted plants and cut flowers (held dry or in solution), or boxed plants and cut flowers with the lids and/or precooling vents completely open and directly exposed to the surrounding atmosphere can be treated. Bedding or potted plants on movable racks are also easily treated.

### **Typical treatment areas**

- Retail and wholesale florist coolers including walk-in, storage and/or walk-in/storage combinations;
- Delivery trucks or vans, truck trailers, inter-modal containers, regardless of their size/volume;
- Any room in a building that can be isolated, sealed and aerated/vented to the outside after treatment.

1. Treatment areas should be checked for gas leakage. Excessive leakage reduces effectiveness of EthylBloc®.
2. If needed, use plastic liners, tape and/or other products and procedures to make enclosed areas more gas/air tight
3. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
4. Temperatures should be between 35° and 75° F (13° and 24° C).
5. Follow steps under Treatment Instructions.

## **APPLICATION IN AREAS SPECIFICALLY BUILT FOR ETHYLBLOC TREATMENT**

**General EthylBloc® Treatment Chamber.** It might be appropriate to construct an area to be used solely for EthylBloc® treatment. Constructing such specific EthylBloc® treatment areas has proven to be an effective way of using EthylBloc®. This maximizes EthylBloc® effectiveness and reduces costs by requiring less product to treat a given number of plant units.

While this treatment area could be built using a number of gas impermeable materials, 4.0 to 6.0 mil polyethylene sheeting works well. Just make sure the

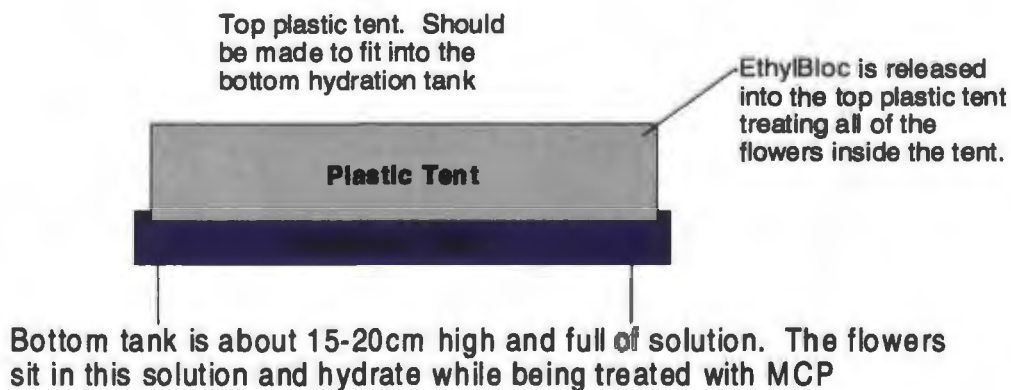
unit seals properly.

One way to help ensure a good seal where the plastic comes in contact with the flooring is to use hydration solution. The treatment unit base is submerged in a trough of hydration solution a few inches deep thus making a good seal where gas cannot escape.

To use such a treatment area, follow the treatment instructions adjusting for treatment volume and temperatures.

**Cut Flower Hydration EthylBloc® Treatment Chamber.** The top of the chamber can be made of 4.0 to 6.0 mil polyethylene sheeting and a wooden frame, or a single plastic piece that can fit into the bottom hydration tank, or something similar. The bottom tank can be any size tub that is capable of holding hydration solution and flowers. See drawing below.

Figure 1



[[Optional text for similar text above in box] Bottom tank is about 6 to 8 inches (15-20 cm) high and full of hydration solution. The flowers sit in this solution and hydrate while being treated with EthylBloc®.]

Place the flowers in bunches or in buckets in the bottom tank. Place the top plastic tent over the bottom holding tank. The tent's bottom edges must be able to be submerged into the hydration solution in the bottom holding tank to insure a seal. Follow Treatment Instructions making sure the EthylBloc® mixture remains separate from the hydration solution throughout the treatment.



**WARRANTY** AgroFresh, Inc, warrants that this material conforms to the chemical description on the label. AgroFresh, Inc, neither makes nor authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, express or implied, concerning this material. The maximum liability for breach of this warranty shall not exceed the purchase price of this product. AgroFresh, Inc's maximum liability for breach of this warranty shall not exceed the purchase price of the product. Buyer and user acknowledge and assume all risks and liabilities resulting from the handling, storage and use of this material, whether or not in accordance with directions.

(Container label first page only; insert label all pages)

## EthylBloc® Technology

EthylBloc® technology is a powder that, when mixed with a Mixing/Buffer solution or water, releases a gas to extend the life and usefulness of many fresh cut flowers, potted flowers, bedding, nursery and foliage plants. Plants are treated with this gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. This product is intended for use only on ornamental, non-food crops. Do not use outdoors or in other non-enclosed areas.

**Active Ingredient:** 1-Methylcyclopropene ..... 0.14%  
**Other Ingredients:** ..... 99.86%  
**Total:** ..... 100.00%

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

### FIRST AID

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

EPA Registration No.: 71297-1

EPA Establishment No.: 32258-SC-001

EthylBloc® Technology  
Last label revision June 21, 2000  
Page 1 of 10

U.S. Patent No. 5,518,988

AgroFresh Inc. is a fully-owned subsidiary of Rohm and Haas Company

EthylBloc® is a registered trademark of Rohm and Haas Company



## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and mixers of this product must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Protective eyewear (goggles or face shield).
- Rubber gloves.
- As a general precaution when exposed to a gas, for activities in enclosed areas wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- Applicators and handlers must follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

EthylBloc® can extend the life and usefulness of many fresh cut flowers and potted flowers, bedding, nursery and foliage plants. It works by inhibiting the negative effects of ethylene and thus prevents or reduces premature flower death, leaf and/or flower fall, and leaf yellowing.

EthylBloc® is specifically designed to be used by all levels of the floral and

nursery industries, including growers, shippers, wholesalers, bouquet manufacturers, mail-order houses and retailers (such as florists, garden centers, nurseries and mass-market outlets). EthylBloc® is very easy to use with almost no labor costs.

EthylBloc® can be used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. It comes with two scoops for easy measuring and the proper Mixing/Buffer Solution. [Optional: EthylBloc® is in a water soluble package for easy use with the proper Buffer (mixing) solution.] The Mixing/Buffer Solution is used to facilitate gas release. [Optional] Users can substitute tap water for the Mixing/Buffer Solution but the gas release will not be as efficient. Contact the manufacturer for specific directions.] EthylBloc® is more effective under warm temperature conditions, 55° to 75°F, (13° to 24° C). Longer treatment times are required for plants held under temperatures below 55°F, (13° C).

## Flowers And Plants

EthylBloc® treatment benefits many flowers and plants such as:

Achillea, Aconitum, Agapanthus, Alchemilla, Allium, Alstroemeria, Alyssum, Aphelandra, Aquilegia, Asclepias, Astrantia, Asparagus Fern, Azalea, Begonia, Bouvardia, Brassia (*Schefflera*), Brodiaea (*Triteleia*), Calathea, Campanula, Carnation, Celosia, Centaurea, Chamaedorea, Chelone, Coleus, Cordyline, Cymbidium, Crocosmia (*Montbretia*), Daucus (Queen Annes Lace), Delphinium, Dendrobium, Dianthus, Dicentra, Dizygotheca, Doronicum, Echium, Eremurus, Eustoma (*Lisianthus*), Ficus, Freesia, Fuchsia, Geranium, Gladiolus, Godetia, Gypsophila, Hibiscus, Ilex (Holly), Impatiens, Ixia, Kalanchoe, Kniphofia, Lavatera, Lily, Lysimachia, Miniature Carnation, Monkshood, Pelargonium, Petunia, Philodendron, Phlox, Physostegia, Poinsettia, Radermachera, Rose, Rudbeckia, Salvia, Saponaria, Scabiosa, Silene, Snapdragon, Solidaster, Stock, Streptocarpus, Sweet William, Trachelium, Trollius, Veronica, Wax Flower, and Zygocactus.

To realize maximum benefits, plants should be treated whether or not they may have been previously treated with EthylBloc® or another anti-ethylene product. Shipments already treated with EthylBloc® do not have to be retreated, however, retreating is not harmful and can even be beneficial. Some species that would likely benefit from additional applications include those with more than one flower per stem (i.e. snapdragons, delphiniums, miniature carnations and alstroemeria) and flowers at different stages of development on the same plant (i.e. geraniums, impatiens, and azaleas).

### TREATMENT INSTRUCTIONS

1. Calculate the treatment volume by measuring the length, width and height of the treatment area in feet or meters. Multiply these three numbers together to obtain the volume of the room/area in cubic feet or cubic meters. For example, if a room is 4 feet wide, 5 feet long and 5 feet high, the volume equals 100 cubic feet.
2. Wear all Personal Protective Equipment (PPE) required under Precautionary Statements.
3. Use a plastic mixing container large enough to hold the EthylBloc® and Mixing/Buffer Solution. A plastic pail works well for larger applications, a plastic bowl or similar container for smaller applications.
4. First add Mixing/Buffer Solution to the mixing container. Then add the EthylBloc® powder. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the following tables/boxes. [or {For Water Soluble Packets} First add Mixing/Buffer Solution to the mixing container. Then add the water soluble packet of EthylBloc® to the mixing container, making sure the water soluble packet is covered. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the following tables/boxes.]
5. Following the addition of EthylBloc® to the Mixing/Buffer Solution, leave the treatment area immediately. Make sure the area is sufficiently sealed. See following application sections for details.
6. POSTING: Signs should be posted on all potential entry points during EthylBloc® treatment (for at least four hours or as otherwise recommended in the Directions for Use). Signs should state "CAUTION. Do not enter area. EthylBloc® treatment underway." Posting is suggested as a means of ensuring optimal effectiveness of EthylBloc®.
7. After the treatment period ends (see below tables/boxes for specified treatment periods), ventilate treated areas with outside air before reentry.
8. Remaining treatment solution can be disposed of on site or at an approved waste disposal facility.



## SPECIFIC TREATMENT PERIODS

**TREATMENT CONDITIONS:** 55 – 75 °F, 4 to 8 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution             | Cubic Feet to Treat |
|---------------------------|---------------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                                 | 13                  |
| 1 Green Scoop             | 2 Tbsp                                | 100                 |
| 38 g Water Soluble Packet | 25 fl oz <u>or</u> 3 cups plus 2 Tbsp | 2500                |
| 75 g Water Soluble Packet | 50 fl oz <u>or</u> 6 cups plus 4 Tbsp | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.4                   |
| 1 Green Scoop             | 30 ml                     | 3                     |
| 38 g Water Soluble Packet | 750 ml                    | 75                    |
| 75 g Water Soluble Packet | 1500 ml                   | 150                   |

**TREATMENT CONDITIONS:** 55 to 75 °F, minimum 10 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1 fl oz Mixing Solution per 200 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution             | Cubic Feet to Treat |
|---------------------------|---------------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                                 | 26                  |
| 1 Green Scoop             | 2 Tbsp                                | 200                 |
| 38 g Water Soluble Packet | 25 fl oz <u>or</u> 3 cups plus 2 Tbsp | 5000                |
| 75 g Water Soluble Packet | 50 fl oz <u>or</u> 6 cups plus 4 Tbsp | 10000               |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.8                   |
| 1 Green Scoop             | 30 ml                     | 6                     |
| 38 g Water Soluble Packet | 750 ml                    | 150                   |
| 75 g Water Soluble Packet | 1500 ml                   | 300                   |

**TREATMENT CONDITIONS:** 35 to 55 °F, minimum 10 hours

**TREATMENT RATE:** 1.5 gram of EthylBloc® plus 1.5 fl oz Mixing Solution per 100 cubic feet

| Amount of EthylBloc®      | Amount of Mixing Solution     | Cubic Feet to Treat |
|---------------------------|-------------------------------|---------------------|
| 1 White Scoop             | 1.5 tsp                       | 13                  |
| 1 Green Scoop             | 3 Tbsp                        | 100                 |
| 38 g Water Soluble Packet | 37 fl oz <u>or</u> 4 2/3 cups | 2500                |
| 75 g Water Soluble Packet | 75 fl oz <u>or</u> 9 1/3 cups | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 7 ml                      | 0.4                   |
| 1 Green Scoop             | 45 ml                     | 3                     |
| 38 g Water Soluble Packet | 1125 ml                   | 75                    |
| 75 g Water Soluble Packet | 2250 ml                   | 150                   |

**Measurements:**

WHITE SCOOP = 0.2 grams EthylBloc® powder

GREEN SCOOP = 1.5 grams EthylBloc® powder

1 teaspoon = 1 tsp = 5 ml

1 Tablespoon = 1 Tbsp = 3 tsp = ½ fl oz

1 fl oz = 2 Tbsp = 30 ml

1 cup = 8 fl oz = 240 ml

38 gram Water Soluble Packet will treat a 20 ft truck container

75 gram Water Soluble Packet will treat a 40 ft truck container

**APPLICATION IN GREENHOUSES PRIOR TO HARVEST**

Fresh cut flowers and bedding, potted flowering, nursery and foliage plants can be treated in the greenhouse just prior to being harvested.

1. The greenhouse must be tightly constructed. Plastic covered houses (especially "double-poly") are generally tighter than fiberglass or glass covered ones.
2. Sections of greenhouses can be enclosed with plastic to make the treatment area smaller, as long as it is sealed sufficiently to prevent the gas from escaping. Excessive leakage reduces effectiveness of EthylBloc®.
3. Make sure all greenhouse vents are closed. Night treatment is recommended mainly because vent closing is more realistic and treatment times can be longer.
4. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
5. All greenhouse treatments should be done at temperatures greater than 55°F (13° C).
6. When calculating treatment volumes, use 2 of the height measured at the ridge/peak for the height measurement. If a greenhouse is 25 feet wide, 100 feet long and 10 feet high, the approximate volume equals  $25 \times 100 \times 10/2 = 12,500$  cubic feet.
7. Follow steps under Treatment Instructions.

## **APPLICATION IN ENCLOSED AREAS SUCH AS: HOLDING/STORAGE ROOMS, COOLERS, AND TRUCK TRAILERS**

Plants being held in enclosed areas can be easily treated with EthylBloc®. For example, non-boxed sleeved potted plants and cut flowers (held dry or in solution), or boxed plants and cut flowers with the lids and/or precooling vents completely open and directly exposed to the surrounding atmosphere can be treated. Bedding or potted plants on movable racks are also easily treated.

### **Typical treatment areas**

- Retail and wholesale florist coolers including walk-in, storage and/or walk-in/storage combinations;
- Delivery trucks or vans, truck trailers, inter-modal containers, regardless of their size/volume;
- Any room in a building that can be isolated, sealed and aerated/vented to the outside after treatment.

1. Treatment areas should be checked for gas leakage. Excessive leakage reduces effectiveness of EthylBloc®.
2. If needed, use plastic liners, tape and/or other products and procedures to make enclosed areas more gas/air tight
3. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
4. Temperatures should be between 35° and 75° F (13° and 24° C).
5. Follow steps under Treatment Instructions.

## **APPLICATION IN AREAS SPECIFICALLY BUILT FOR ETHYLBLOC TREATMENT**

**General EthylBloc® Treatment Chamber.** It might be appropriate to construct an area to be used solely for EthylBloc® treatment. Constructing such specific EthylBloc® treatment areas has proven to be an effective way of using EthylBloc®. This maximizes EthylBloc® effectiveness and reduces costs by requiring less product to treat a given number of plant units.

While this treatment area could be built using a number of gas impermeable materials, 4.0 to 6.0 mil polyethylene sheeting works well. Just make sure the



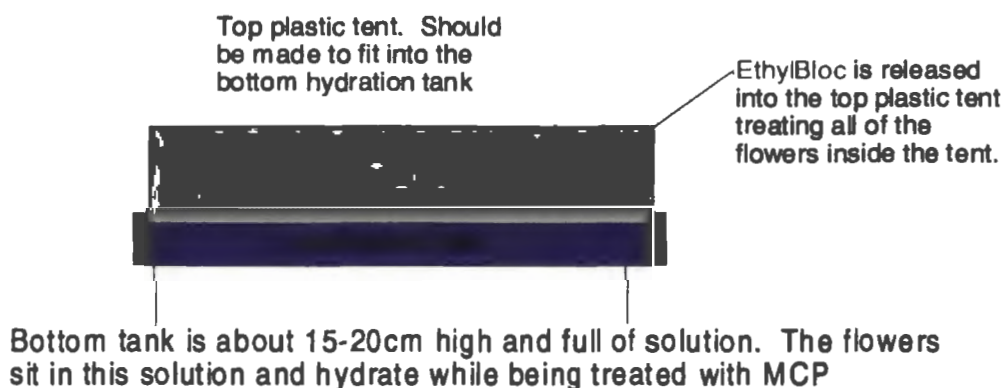
unit seals properly.

One way to help ensure a good seal where the plastic comes in contact with the flooring is to use hydration solution. The treatment unit base is submerged in a trough of hydration solution a few inches deep thus making a good seal where gas cannot escape.

To use such a treatment area, follow the treatment instructions adjusting for treatment volume and temperatures.

**Cut Flower Hydration EthylBloc® Treatment Chamber.** The top of the chamber can be made of 4.0 to 6.0 mil polyethylene sheeting and a wooden frame, or a single plastic piece that can fit into the bottom hydration tank, or something similar. The bottom tank can be any size tub that is capable of holding hydration solution and flowers. See drawing below.

Figure 1



[[Optional text for similar text above in box] Bottom tank is about 6 to 8 inches (15-20 cm) high and full of hydration solution. The flowers sit in this solution and hydrate while being treated with EthylBloc®.]

Place the flowers in bunches or in buckets in the bottom tank. Place the top plastic tent over the bottom holding tank. The tent's bottom edges must be able to be submerged into the hydration solution in the bottom holding tank to insure a seal. Follow Treatment Instructions making sure the EthylBloc® mixture remains separate from the hydration solution throughout the treatment.

**WARRANTY** AgroFresh, Inc, warrants that this material conforms to the chemical description on the label. AgroFresh, Inc, neither makes nor authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, express or implied, concerning this material. The maximum liability for breach of this warranty shall not exceed the purchase price of this product. AgroFresh, Inc's maximum liability for breach of this warranty shall not exceed the purchase price of the product. Buyer and user acknowledge and assume all risks and liabilities resulting from the handling, storage and use of this material, whether or not in accordance with directions.



January 27, 2004

Office Of Pesticide Programs (7511C)  
Biocides and Pollution Prevention Division  
U.S. Environmental Protection Agency  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

Attention: Mr. Driss Benmhend

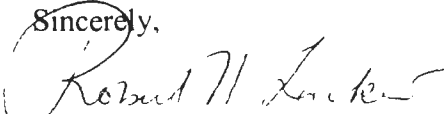
Dear Mr. Benmhend:

Re: EthylBloc™ Technology  
EPA Registration No. 71297-1  
Active Ingredient = 1-Methylcyclopropene  
PR Notice 2001-1

PR Notice 2001-1 requires registrants to amend the First Aid Statements on their pesticide product labels and contains recommended label language. Enclosed are five copies of the label for EthylBloc™ Technology which has been modified according to the recommendations in PR Notice 2001-1. The changes on the label are highlighted in red.

Please let me know if you have any questions or need any further information.

Sincerely,

  
Robert H. Larkin





United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☒ Amendment  
☐ Other

OPP Identifier Number

## Application for Pesticide - Section I

|                                                                                                                                                                                                                     |                                                                                                                                                                                      |                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br>71297                                                                                                                                                                                  | 2. EPA Product Manager<br>Driss Benmhend                                                                                                                                             | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br>EthylBloc Technology                                                                                                                                                                   | PM#                                                                                                                                                                                  |                                                                                                            |
| 5. Name and Address of Applicant (Include ZIP Code)<br>AgroFresh Inc./Rohm and Haas Company<br>100 Independence Mall West<br>Philadelphia, PA 19106-2399<br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                            |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Amendment - Explain below.                 | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Response to PR Notice 2001-1.

## Section - III

|                                                                                                                                                                     |                                                                               |                                                                                        |  |                                                                                                                                                                                          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |  | 2. Type of Container                                                                                                                                                                     |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No                                                                            | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No |  | <input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |  |
| If "Yes" Unit Packaging wgt. No. per container                                                                                                                      |                                                                               | If "Yes" Package wgt. No. per container                                                |  |                                                                                                                                                                                          |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            |  | 5. Location of Label Directions<br><input type="checkbox"/>                                                                                                                              |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               |                                                                                        |  | <input type="checkbox"/> Other _____                                                                                                                                                     |  |

Certification must submitted

## Section - IV

|                                                                                                                                                                                                                                                                                    |  |                                                  |  |                                                   |                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------|--|---------------------------------------------------|--------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                                      |  |                                                  |  |                                                   |                                            |
| Name<br>Robert H. Larkin                                                                                                                                                                                                                                                           |  | Title<br>President, Regulatory Solutions, LLC    |  | Telephone No. (include Area Code)<br>215-641-7337 |                                            |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |  |                                                  |  |                                                   | 6. Date Application Received (Stamped)<br> |
| 2. Signature<br>                                                                                                                                                                                                                                                                   |  | 3. Title<br>President, Regulatory Solutions, LLC |  |                                                   |                                            |
| 4. Typed Name<br>Robert H. Larkin                                                                                                                                                                                                                                                  |  | 5. Date<br>January 27, 2004                      |  |                                                   |                                            |

DP BARCODE: D283049

CASE: 063215  
SUBMISSION: S615722

DATA PACKAGE RECORD  
BEAN SHEET

DATE: 05/15/02  
Page 1 of 1

\* \* \* CASE/SUBMISSION INFORMATION \* \* \*

CASE TYPE: REGISTRATION ACTION: 320 AMD-LBL REV-DAT REQ H/E R  
CHEMICALS: 224459 Cyclopropene,1-methyl- (7CI,8CI,9CI) (CA INDEX NAM 0.1400%

ID#: 071297-00001 ETHYLBLOC  
COMPANY: 071297 AGRO FRESH INC.  
PRODUCT MANAGER: 90 JANET ANDERSEN 703-308-8128 ROOM: CS1 5TH FL  
PM TEAM REVIEWER: DRISS BENMHEND 703-308-9525 ROOM: CS1 5TH FL  
RECEIVED DATE: 01/08/02 DUE OUT DATE: 07/07/02

\* \* \* DATA PACKAGE INFORMATION \* \* \*

DP BARCODE: 283049 EXPEDITE: Y DATE SENT: 05/15/02 DATE RET.: / /  
CHEMICAL: 224459 Cyclopropene,1-methyl- (7CI,8CI,9CI) (CA INDEX NAME)  
DP TYPE: 001

|               | CSF: N |    | LABEL: N |     |
|---------------|--------|----|----------|-----|
| ASSIGNED TO   | DATE   | IN | DATE     | OUT |
| DIV : BPPD    | /      | /  | /        | /   |
| BRAN: BPPD-IO | /      | /  | /        | /   |
| SECT: IO      | /      | /  | /        | /   |
| REVR :        | /      | /  | /        | /   |
| CONTR:        | /      | /  | /        | /   |

ADMIN DUE DATE: 10/02/02  
NEGOT DATE: / /  
PROJ DATE: / /

\* \* \* DATA REVIEW INSTRUCTIONS \* \* \*

Attached, you will find the following study submitted in support of the tolerance exemption for i-Methylcyclopropene:  
\* Inhalation Developmental Tox. Study in Rats MRID # 454586-08.

Please expediate this review  
Thanks

Driss

\* \* \* DATA PACKAGE EVALUATION \* \* \*

No evaluation is written for this data package

\* \* \* ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION \* \* \*

| DP BC | BRANCH/SECTION | DATE OUT | DUE BACK | INS | CSF | LABEL |
|-------|----------------|----------|----------|-----|-----|-------|
|-------|----------------|----------|----------|-----|-----|-------|

DP BARCODE: D283051

CASE: 063215  
SUBMISSION: S615723

DATA PACKAGE RECORD  
BEAN SHEET

DATE: 05/15/02  
Page 1 of 1

\* \* \* CASE/SUBMISSION INFORMATION \* \* \*

CASE TYPE: REGISTRATION ACTION: 320 AMD-LBL REV-DAT REQ H/E R  
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ID#: 071297-00001 ETHYLBLOC  
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RECEIVED DATE: 01/08/02 DUE OUT DATE: 07/07/02

\* \* \* DATA PACKAGE INFORMATION \* \* \*

DP BARCODE: 283051 EXPEDITE: N DATE SENT: 05/15/02 DATE RET.: / /  
CHEMICAL: 224459 Cyclopropene,1-methyl- (7CI,8CI,9CI) (CA INDEX NAME)  
DP TYPE: 001

| ASSIGNED TO   | CSF: N | DATE | IN | LABEL: N | DATE OUT | ADMIN DUE DATE: 10/02/02 |
|---------------|--------|------|----|----------|----------|--------------------------|
| DIV : BPPD    |        | /    | /  |          | /        | NEGOT DATE: / /          |
| BRAN: BPPD-IO |        | /    | /  |          | /        | PROJ DATE: / /           |
| SECT: IO      |        | /    | /  |          | /        |                          |
| REVR :        |        | /    | /  |          | /        |                          |
| CONTR:        |        | /    | /  |          | /        |                          |

\* \* \* DATA REVIEW INSTRUCTIONS \* \* \*

Attached, you will find the following studies submitted in support of the registration of EthylBloc containing the ai. 1-Methylcyclopropene:

- 1- Product Chemistry MRID# 454586-01
2. Analytical Method MRID# 454586-02
3. Physical Cem.Charact. MRID# 454586-03
4. Acute Dermal Tox. MRID# 454586-04
5. Skin Irritation MRID# 454586-05
6. Eye Irritation MRID# 454586-06
7. Dermal Sensitization MRID# 454586-07

Please review and comment  
Thanks  
Driss

\* \* \* DATA PACKAGE EVALUATION \* \* \*

No evaluation is written for this data package

\* \* \* ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION \* \* \*

| DP BC | BRANCH/SECTION | DATE OUT | DUE BACK | INS | CSF | LABEL |
|-------|----------------|----------|----------|-----|-----|-------|
|-------|----------------|----------|----------|-----|-----|-------|



To: **DRISS BENM HEND**  
**U.S. EPA**

FAX: **703-308-7026**

RE: **AGROFRESH/ROHM AND HAAS SUBMISSION OF JUNE 28, 2001**

FROM: **GEORGE A. HAZELTON, Ph.D.**  
SENIOR TOXICOLOGIST

**ROHM AND HAAS COMPANY**  
RESEARCH LABORATORIES  
727 NORRISTOWN ROAD, PO BOX 804  
SPRING HOUSE PENNSYLVANIA 18477-0804  
(215) 641-7473 FAX (215) 619-1821  
E-MAIL: RSTOCH@ROHM-HAAS.COM



#PAGES = ~~5~~  
7 pages (including cover page)

PAGE 1

**Exposures Expressed on a mg/kg/day Basis for Inhalation Studies****Developmental Toxicity Study (Rohm and Haas Report No. 00R-181; MRID 45458608)**

| SPECIES, SEX            | PPM AI    | MG AI/L* | MG/KG/DAY** |
|-------------------------|-----------|----------|-------------|
| Rat, females (pregnant) | 107 ± 11  | 0.236    | 56          |
|                         | 329 ± 25  | 0.727    | 174         |
|                         | 1029 ± 53 | 2.27     | 543         |

\* Conversion:  $\text{mg/L} = \frac{\text{ppm} \times 54 (\text{molecular weight of 1-MCP})}{24.45 \times 1000}$

\*\* Conversion: 300 g rat inhales 0.2 L/minute for 360 minutes, and an absorption factor of 100% (factor of 1.0).

$$\text{mg/kg/day} = \frac{\text{mg a.i./L} \times 0.2 \text{ l/min} \times 360 \text{ min.}}{0.3 \text{ kg rat}}$$

page 2

**Exposures Expressed on a mg/kg/day Basis for Inhalation Studies**  
(continued)

**Three Month Inhalation Toxicity Study (Rohm and Haas Report No. 00R-183;  
MRID 45609001)**

| SPECIES, SEX | PPM AI      | MG AI/L | MG AI/KG/DAY |
|--------------|-------------|---------|--------------|
| Rat, males   | 24 ± 5.0    |         | 9            |
|              | 107 ± 7.4   |         | 39           |
|              | 1031 ± 41.1 |         | 380          |
| Rat, females | 24 ± 5.0    |         | 15           |
|              | 107 ± 7.4   |         | 66           |
|              | 1031 ± 41.1 |         | 640          |

\* conversion:  $\text{mg/L} = \frac{\text{ppm} \times 54 (\text{molecular weight of 1-MCP})}{24.45 \times 1000}$

\*\* Conversion: 440 g male rat (or 260 g female rat) inhales 0.2 L/minute for 360 minutes and an absorption factor of 100% (factor of 1.0).

$\text{mg/kg/day} = \frac{\text{mg a.i./L} \times 0.2 \text{ l/min} \times 360 \text{ min.}}{0.44 \text{ kg male rat (or 0.26 kg female rat)}}$

page 3



**Consumer Risk Based on Number of Apples Consumed****Assumptions:**

Residues in apple: 4.0 ppb or 4.0 ug/kg [overall average found in apples, see residue data].

Apple size: 200 g or 0.2 kg apple

Weight of individual: 60 kg adult or 10 kg child

**Toxicology endpoints:**

Acute exposure (single day) = 56 mg/kg/day [This is NOEL from developmental toxicity study and there was no evidence of developmental toxicity].

Chronic exposure (lifetime) = 9 mg/kg/day [This is NOEL from subchronic study].

**Adult apple consumption:**

Amount of residue adult could eat based on acute NOEL

Single day exposure:  $56 \text{ mg/kg/day} \times 60 \text{ kg} = 3360 \text{ mg}$  or 3,360,000 ug  
*This is the amount that could be consumed by an adult on any single day.*

An apple weighing 0.2 kg that contains 4 ug /kg residue (or 4 ppb) will have 0.8 ug of residue in each apple.

Amount of apples could be consumed in a single day by adult =  
 $3,360,000 \text{ ug} \div 0.8 \text{ ug per apple} = 4,200,000 \text{ apples}$

*Conclusion: an adult would need to consume 4,200,000 apples on a single day.*

Amount of residue adult could eat based on subchronic NOEL

Multiple day exposure:  $9 \text{ mg/kg/day} \times 60 \text{ kg} = 540 \text{ mg}$  or 540,000 ug  
*This is the amount that could be consumed by an adult every day of his/her life.*

An apple weighing 0.2 kg that contains 4 ug /kg residue (or 4 ppb) will have 0.8 ug of residue in each apple.

Amount of apples could be consumed in a multiple days by adult =  
 $540,000 \text{ ug} \div 0.8 \text{ ug per apple} = 675,000 \text{ apples}$

*Conclusion: an adult would need to consume 675,000 apples every day of his/her life.*

PAGE 4

**Child apple consumption:**

Amount of residue child could eat based on acute NOEL

Single day exposure:  $56 \text{ mg/kg/day} \times 10 \text{ kg} = 560 \text{ mg}$  or  $560,000 \text{ ug}$

*This is the amount that could be consumed by a child on any single day.*

An apple weighing 0.2 kg that contains 4 ug /kg residue (or 4 ppb) will have 0.8 ug of residue in each apple.

Amount of apples could be consumed in a single day by child =

$$560,000 \text{ ug} \div 0.8 \text{ ug per apple} = 700,000 \text{ apples}$$

*Conclusion: a child would need to consume 700,000 apples on a single day.*

Amount of residue child could eat based on subchronic NOEL

Single day exposure:  $9 \text{ mg/kg/day} \times 10 \text{ kg} = 90 \text{ mg}$  or  $90,000 \text{ ug}$

*This is the amount that could be consumed by a child every day.*

An apple weighing 0.2 kg that contains 4 ug /kg residue (or 4 ppb) will have 0.8 ug of residue in each apple.

Amount of apples could be consumed in every day by child =

$$90,000 \text{ ug} \div 0.8 \text{ ug per apple} = 112,500 \text{ apples}$$

*Conclusion: a child would need to consume 112,500 apples every day.*

page 5

**Projected Residues in Other Fruits and Vegetables**

In apples the overall average residues was 3 to 4 ppb (see table below). A theoretical maximum for apples would be approx. 9 ppb. In risk calculations previously submitted to agency we used worst case value of 10 ppb.

***Residue Data:*****Summary of Residues of 1-MCP in Different Apple Varieties**

*[All values are adjusted for maximum use rate of 1000 ppm a.i. (v/v)]\**

| Apple Variety | Average residue ppb | Min. Residue ppb | Max. Residue ppb | Number of Samples |
|---------------|---------------------|------------------|------------------|-------------------|
| Red Delicious | 2.8                 | 1.0              | 5.0              | 21                |
| Gala          | 4.3                 | 1.9              | 7.6              | 15                |
| Granny Smith  | 3.3                 | 1.5              | 6.1              | 12                |
| Fuji          | 2.7                 | 1.2              | 4.0              | 12                |
| Overall       | 3.3                 | 1.0              | 7.6              | 60                |

\*Residue studies were conducted using an application rate of 1200 ppm 1-MCP (v/v); however, the maximum use rate on the label will only be 1000 ppm 1-MCP (v/v). Residue values were adjusted using the following factor- 0.833 (or  $1000/1200$ )<sup>18</sup>.

Estimates of residues in other representative crops can be calculated by knowing treatment rates, packing density of fruit (or vegetable) and assuming worst case- all 1-MCP goes into fruit or vegetable (see calculations next page).

page 6



**Estimate of Risk to Consumer (Dietary Exposure)**

10 ppb is a worst-case default for each food commodity, since the theoretical maximum residue concentration is 9 ppb or less.

**Example (for apples):**

Max. Residue Conc. = max. use rate (mg a.i./M<sup>3</sup>) + packing density (kg/M<sup>3</sup>)

Assumes all 1-MCP released ends up in apples.

Apples:  $2.24 \text{ mg a.i./M}^3 + 250 \text{ kg/M}^3 = 0.0089 \text{ mg 1-MCP/kg apples (or 9 ppb)}$

Theoretical maximum residue concentration for each commodity:

| Commodity | Maximum use rate (ppb) | Maximum use rate (mg a.i./M <sup>3</sup> ) | Packing density (kg/M <sup>3</sup> ) | Maximum Residue (ppb) |
|-----------|------------------------|--------------------------------------------|--------------------------------------|-----------------------|
| Apples    | 1000                   | 2.24                                       | 250                                  | 9.0                   |
| Pears     | 500                    | 1.12                                       | 250                                  | 4.5                   |
| Avocadoes | 300                    | 0.67                                       | 145                                  | 4.6                   |
| Melons    | 1000                   | 2.24                                       | 257                                  | 8.7                   |
| Cucumbers | 1000                   | 2.24                                       | 250                                  | 9.0                   |

**Conclusion:** Using packing density of commodity and treatment rates it can be shown with representative commodities that the theoretical maximum would be no more than 9.0 ppb (or no more than 10 ppb).

PAGE 7

REPLY TO:  
RESEARCH LABORATORIES  
727 NORRISTOWN ROAD, P.O. BOX 904  
SPRING HOUSE, PA 19477-0904  
(215) 841-7000 FAX (215) 841-7857



January 2, 2002

Document Processing Desk (APPL)  
Office Of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biopesticides and Pollution Prevention Division  
Room 266A, Crystal Mall 2  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Mr. Benmhend:

Subject: Pending application 71297-E, SmartFresh  
Your letter of September 21, 2001

In your letter of September 21, 2001 three studies were identified as deficient with respect to the requirements of PR Notice 86-5. A copy of your letter and analysis are enclosed. The deficient studies are identified in your letter as REJ(01), REJ(02) and REJ(03).

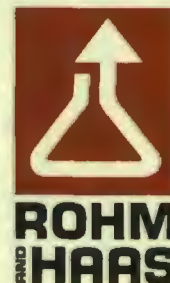
These three studies should not have been submitted to you as stand alone studies. They were submitted in error. They are already included as appendices in MRID No. 45458601 as Appendices III, IV, and V. I apologize for the inconvenience which this has caused. Please destroy the studies designated as REJ (01), REJ (02), and REJ(03) and continue with the review process for application 71297-E. If you have any questions, I can be reached at 215-641-7397. Thank you.

Sincerely,

Robert H. Larkin, Ph.D.  
Regulatory Director  
AgroFresh Inc.  
c/o Rohm and Haas Company



REPLY TO:  
RESEARCH LABORATORIES  
727 NORRISTOWN ROAD, P.O. BOX 904  
SPRING HOUSE, PA 19477-0904  
(215) 641-7000 FAX (215) 641-7857



October 9, 2001

Document Processing Desk (APPL)  
Office Of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biopesticides and Pollution Prevention Division  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

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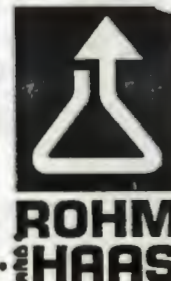
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Sincerely,

Robert H. Larkin, Ph.D.  
Regulatory Director  
AgroFresh Inc.  
c/o Rohm and Haas Company

*Driss,  
This was just  
returned to me as  
"non-deliverable". We  
have addressed it  
to the Washington D.C.  
address. Bob*





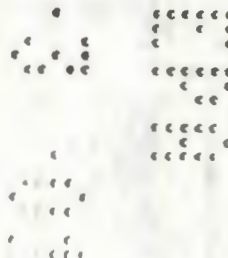
June 28, 2001

454586-00

...

Document Processing Desk (APPL)  
Office of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biopesticides and Pollution Prevention Division  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

RHL-01-100



Dear Mr. Benmhend:

Subjects: **AgroFresh™ Technology (EPA Regis. No. 71297-) F**  
**Active Ingredient = 1-Methylcyclopropene**

**Application for Section 3 Registration for Indoor Use on Post-Harvested Fruits and Vegetables**

AgroFresh, Inc., a fully-owned subsidiary of Rohm and Haas Company, submits an application for a Section 3 registration for the product SmartFresh™, a powdered formulation containing 3.3% 1-methylcyclopropene (1-MCP) active ingredient in [REDACTED], for indoor use on post-harvest fruits and vegetables. 1-MCP has been classified by EPA as a plant growth regulator structurally similar to ethylene and other naturally occurring plant materials, and eligible for a reduced data set requirement. 1-MCP is regulated by the Biopesticides and Pollution Prevention Division (BPPD) of EPA. This new formulation of 1-MCP will be marketed in disposable, ready to use generators. The applicator will place the appropriate generator in the room containing the commodity to be treated and seal off the room during one treatment period.

EthylBloc®, a formulation containing 0.14% 1-MCP in [REDACTED] was registered for non food use on flowers and related materials in April, 1999 (EPA Regis. No. 71297-1).

AgroFresh, Inc. (formerly BioTechnologies for Horticulture, Inc.) submitted a petition for an exemption from the requirement of tolerances for 1-MCP residues on food commodities (PP 06144) in April, 2000 in support of a label amendment for indoor use of EthylBloc technology (0.14% 1-MCP) on post-harvest fruits and vegetables. The Notice of Filing was published in the Federal Register in June, 2000. Additional studies, including a preliminary <sup>14</sup>C-1-MCP apple residue study, mutagenicity studies and a two-week rat inhalation study conducted with 1-MCP gas, and a dietary and worker risk assessment document, were submitted to the Agency on 06Apr01 in support of our 1-MCP exemption from tolerance petition (S. Longacre to D. Benmhend; SLL-01-084). Studies presently at the Agency demonstrate that negligible residues (< 0.009 ppm) on apples will result from the indoor post-harvest use of 1-MCP, that 1-MCP is not mutagenic or acutely toxic, and that large margins of safety exist for 1-MCP for both consumers and workers. We believe that sufficient data have been submitted to the Agency to support the granting of the exemption from the requirement of tolerances for 1-MCP residues on food commodities.

CODED 5.T.



Mr. Benmhend

28June01

Page 2

The maximum 1-MCP treatment concentration will be 1 ppm v/v, whether the 1-MCP is released from the 0.14% (EthylBloc) or 3.3% formulation (SmartFresh).

The Signal Word for SmartFresh will be CAUTION based on the acute toxicity studies submitted previously and with this petition. A proposed label for the commercial indoor use of SmartFresh on post-harvest fruits and vegetables is included in this application. Product chemistry studies on SmartFresh are also submitted in this application.

Waiver justifications for ecotoxicology and environmental fate studies for indoor use of 1-MCP formulations were previously submitted with the EthylBloc technology (0.14% 1-MCP) food-use label amendment petition (Longacre, 2000; MRID not known), and are contained in this petition as well.

**Additional Items:**

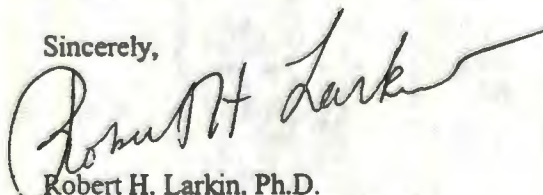
An FQPA Notice of Filing for 1-MCP on post-harvest fruit and vegetables (MRID 450396-1) was submitted in April, 2000 as part of the 1-MCP exemption from tolerance petition. This Notice of Filing was published in the Federal Register on 21Jun00. It is our conclusion that there is a reasonable certainty that no harm will result from aggregate exposure to 1-MCP residues to the US population, including infants and children.

A tolerance fee of \$12,550, as specified in the 1999 EPA tolerance fee schedule for an exemption from the requirement of a tolerance [Federal Register, 64 (101); 26May99; p 28386; Sec 180.33(c)], was sent to EPA's Headquarters Accounting Operations Branch in April, 2000 in support of the previously submitted exemption from tolerance petition.

No Formulator's Exemption is needed since 1-MCP is synthesized in an *in situ* process during the manufacture of SmartFresh by Rohm and Haas Company.

Please assign MRID numbers to the new reports submitted in support of this application, and please contact me by phone (215-592-2078), fax (215-592-3414), or e-mail (mah55y@rohmmaas.com) if you have any questions about this submission.

Sincerely,



Robert H. Larkin, Ph.D.

Director, Agricultural Chemicals

Registration and Regulatory Affairs Department

cc: Sheryl Reilly / EPA BPPD

Attachments (reports in triplicate):

|    | Guideline<br>Reference<br>Number | Rohm and Haas<br>Company<br>Report<br>Number | Report Title                                                                                                                                                                                                               | MRID     |
|----|----------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1. | Series 830<br>Group A            | APR-01-068                                   | J. C. Crawford; Product Chemistry Series 830 Group A: Product Identity, Composition, and Analysis of 1-MCP Formulation; 17May01                                                                                            | 45458601 |
| 2. | Series 830<br>Group A            | TM-2000-245-01                               | W. Hu; Determination of AI and Impurities in 1-MCP Formulation by Capillary Gas Chromatography; 18Dec00                                                                                                                    | REJ(01)  |
| 3. | Series 830<br>Group A            | APR-01-018                                   | W. Hu; Product Chemistry Series 830 Group A: Product Identity, Composition and Analysis of 1-MCP Formulation - GLP Analysis of Five Representative Batches of 1-MCP Formulation; 26Apr01                                   | REJ(02)  |
| 4. | Series 830<br>Group A            | APR-01-051                                   | W. Hu; Product Chemistry Series 830 Group A: Product Identity, Composition and Analysis of 1-MCP Formulation - GLP GC-MS Structure Confirmation of AI (1-MCP) and Impurities >0.1% by Weight in 1-MCP Formulation; 26Apr01 | REJ(03)  |
| 5. | Series 830<br>Group A            | APR-01-017                                   | W. Hu; GLP Validation of Test Method TM-2000-245-01; 19Mar01                                                                                                                                                               | 45458602 |
| 6. | Series 830<br>Group B            | APR-01-069                                   | J. C. Crawford; Product Chemistry Series 830 Group B: Physical and Chemical Characteristics of 1-MCP Formulation; 27Apr01                                                                                                  | 45458603 |
| 7. | 152-11<br>(OPPTS<br>870.1200)    | 00R-200                                      | J. R. Parno, L. P. Craig, and S. L. Eberly; 1-Methylcyclopropene Alpha-Cyclodextrin Complex (3.3% a.i.): Acute Dermal Toxicity Study in Male and Female Rats; 08Feb01                                                      | 45458604 |
| 8. | 152-14<br>(OPPTS<br>870.2500)    | 00R-201                                      | J. R. Parno, L. P. Craig, and S. L. Eberly; 1-Methylcyclopropene Alpha-Cyclodextrin Complex (3.3% a.i.): Skin Irritation Study in Rabbits; 08Feb01                                                                         | 45458605 |



(Continued):

|                                      |         |                                                                                                                                                                                       |         |
|--------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 9.<br>152-13<br>(OPPTS<br>870.2400)  | 00R-202 | J. R. Parno, L. P. Craig, and S. L. Eberly; 1-Methylcyclopropene Alpha-Cyclodextrin Complex (3.3% a.i.): Eye Irritation Study in Rabbits; 08Feb01                                     | 4545866 |
| 10.<br>152-15<br>(OPPTS<br>870.2600) | 00R-203 | J. R. Parno, D. M. Anderson, and T. L. Danberry; 1-Methylcyclopropene Alpha-Cyclodextrin Complex (3.3% a.i.): Dermal Sensitization Study in Guinea Pigs - Maximization Test; 07Feb 01 | 4545867 |
| 11.<br>152-23<br>(OPPTS<br>870.3700) | 00R-181 | S. L. Wood, L. P. Craig, H. J. Bernacki, and T. L. Danberry; 1-Methylcyclopropene: Inhalation (Whole Body) Developmental Toxicity Study in Rats; 18Apr01                              | 4545868 |

not  
verified

Administrative materials submitted with this letter:

- 1) EPA Form 8570-1 (OPP Identifier 250087);
- 2) Petition binder containing Sections A, B, C, D, E, F, G, I and J; plus Data Matrix Tables (new and previously submitted studies);
- 3) EPA Form 8570-34: Certification with Respect to Citation of Data;
- 4) Proposed Label for 71297- (Post-Harvest Fruits and Vegetables; Sec 3(2) RHL; 28June01) (5 copies).



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

SEP 21 2001

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Robert H. Larkin, Ph.D.  
Director, Agricultural Chemicals  
Registration and Regulatory Affairs Department  
Agrofresh, Inc./Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA 19106

Subject: Pending application 71297-E, your application dated June 28, 2001,  
received by the Agency.  
Product Name: SmartFresh™

Dear Mr. Larkin:

All data submitted to the Agency to support registration actions must conform to a standard format, organization, and other requirements described in Pesticide Registration Notice (PRN) 86-5 dated July 29, 1986. This notice was mailed to all registrants on record with the Agency at that time and is currently available on the Internet ([www.epa.gov/PR\\_Notices/](http://www.epa.gov/PR_Notices/)).

All incoming data are screened for compliance with the PR Notice. Data that are in compliance are assigned Master Record Identification Numbers (MRIDs), microfilmed and forwarded for appropriate action. Data that do not comply with the requirements of the Notice are not admitted into the system. Such data must be brought into compliance with the PR Notice before the data can be given further consideration in support of the regulatory action for which the data were submitted.

The data submitted in connection with the proposed action listed above have been found deficient with respect to the requirements of PRN 86-5. The deficiencies are identified in the enclosed comments from the Information Services Branch of the Program Management and Support Division.

Biopesticides and Pollution Prevention Division will hold associated documents for 75 days to give opportunity to resubmit the supporting data in acceptable form. If you have not done so by that time, the application and other associated documents may be administratively withdrawn from further consideration without notice to you, in accordance with policies established by PR Notice 75-4 dated August 27, 1975.



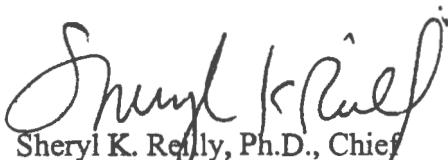
Recycled/Recyclable  
Printed on paper that contains  
at least 75% recycled fiber

Should you wish to pursue the registration of your product after the application has been withdrawn you will have to submit a complete new application.

If you choose to resubmit your data you should enclose a copy of this letter and the enclosure to identify the data as a corrected resubmission of data previously found deficient with respect to PRN 86-5. Only resubmit those items of data for which no MRID numbers were assigned. If any of your previous items was assigned an MRID number, do not resubmit that particular item of data, but simply refer to it by title and by the assigned MRID number.

Should you have any questions, please feel free to contact Driss Benmhend at (703) 308-9525.

Sincerely,

A handwritten signature in black ink, appearing to read "Sheryl K. Reilly".

Sheryl K. Reilly, Ph.D., Chief  
Biochemical Pesticides Branch  
Biopesticides and Pollution Prevention  
Division (7511C)

Enclosure

cc: Driss Benmhend, RAL



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs

AUG 3 1991

AGROFRESH, INC./ROHM AND HAAS COMPANY  
100 INDEPENDENCE MALL WEST  
PHILADELPHIA, PA 19106

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 07/03/01. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your data submittal was found to be partially in compliance with the standards for submission of data contained in PR Notice 86-5, with the exceptions noted below. A copy of your transmittal bibliography is enclosed, annotated with the Master Record ID's (MRIDs) assigned to each document accepted. Please use these numbers in all future references to these documents. If deficiencies were found which apply to individual accepted studies, they are listed below following the applicable MRID. Any document which has been assigned a MRID has been accepted under PR Notice 86-5. If any comments related to a MRID appear on this report, they are provided for your information and reference when preparing future submissions. Some individual documents were not acceptable, and all copies are being returned to you for correction for the reasons indicated below. These rejected studies have been assigned separate identification numbers which are annotated on both the enclosed bibliography and the rejected document labels. The rejected studies and their deficiencies are described below.

Rejected study [01] :

- \* No title page was included for this study.

You must include one of the two acceptable statements of data confidentiality claims under FIFRA section 10(d)(1)(A), (B), or (C) as the second element in each study. The language of two alternative forms of the Statement of Data Confidentiality Claims, shown in Attachment 3 of PR Notice 86-5, cannot be altered. See pages 8 and 13 of the Notice.

Rejected study [02] :

- \* Each study which contains a claim of confidentiality

under FIFRA 10(d)(1)(A), (B) or (C) must be prepared with a releasable part of the study as well as a confidential attachment. The releasable part of the study must contain a title page, confidentiality claim statement, any data not protected by the above mentioned FIFRA section and cross reference(s) to protected data which can be found in the confidential attachment. See p. 8 of PR Notice 86-5.

Rejected study [03] :

\* Each study which contains a claim of confidentiality under FIFRA 10(d)(1)(A), (B) or (C) must be prepared with a releasable part of the study as well as a confidential attachment. The releasable part of the study must contain a title page, confidentiality claim statement, any data not protected by the above mentioned FIFRA section and cross reference(s) to protected data which can be found in the confidential attachment. See p. 8 of PR Notice 86-5.

HISTORY

- June 28, 2001 - AgroFresh  
- Delivered Studies to EPA
- Sep. 21, 2001 - EPA notified AgroFresh that 3 studies  
were rejected under PR 86-5
- Oct. 9, 2001 - AgroFresh wrote that rejected studies were not  
meant to stand alone, but are included as  
Appendices to Series 830 Group A (MRID 45458601)
- Dec, 2001 - Letter of Oct. 9, 2001 is returned to AgroFresh  
as "undeliverable"
- Jan. 2, 2002 - AgroFresh resubmits Letter of Oct 9, 2001 using  
new address (Washington, DC instead of Arlington, VA)

MAY 15, 2002

To: DRISS BENM HEND  
U.S. EPA

FAX: 703-308-7026

RE: AGROFRESH/ROHM AND HAAS SUBMISSION OF JUNE 28, 2001

FROM: GEORGE A. HAZELTON, Ph.D.  
SENIOR TOXICOLOGIST

ROHM AND HAAS COMPANY  
RESEARCH LABORATORIES  
727 NORRISTOWN ROAD PO BOX 804  
SPRING HOUSE PENNSYLVANIA 19477-0804  
(215) 641-7473 FAX (215) 618-1621  
E-MAIL RSTGHH@ROHMHAAS.COM



#PAGES = 10



# BPPD PRAT ACTION CODING FORM

PM 90: Janet Andersen

REVIEWER: Driss Brumhead  
(ASSIGNED BY: SKR)

EPA REG./FILE SYMBOL ~~A297~~ OF6144

ACTION CODE 232

(NEW a.i./EUPs/Tolerances: Yes        /No       )

SUBMISSION BARCODE                                 

DATE ON APPLICATION 4-11-00

EPA RECEIVED DATE 4-12-00

PM RECEIVED DATE 4-21-00

ASSIGNED IN PRAT: YES        NO X

COMPLETED BY: T. Dethlefsen DATE: 4/24/00

=====

## FINAL ACTION

Response Code                                 

Response Date:                                 

MOS:                                  (1) Cite-All  
                                 (4) Not Applicable  
                                 (8) Selective

CRP: Yes        No       

Restricted Use: Yes        No       

Manufacturing Use: Yes        No       

Exclusive Use: Yes        No       

*Sent to  
Reviewer on  
5/22/00*

*Petition w/ DATA  
Enghloer  
(MCP)*

REPLY TO:  
RESEARCH LABORATORIES  
727 NORRISTOWN ROAD, P.O. BOX 904  
SPRING HOUSE, PA 19477-0904  
(215) 641-7000 FAX (215) 641-7857



March 7, 2002

Mr. Driss Benmhend  
Biopesticides and Pollution Prevention Division  
U. S. Environmental Protection Agency  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

Dear Mr. Benmhend:

Re: December 6, 2001 Preregistration Meeting  
EthylBloc Technology (EPA Registration No. 71297-1)  
SmartFresh™ (EPA File Symbol 71297- E)

The attendees of the December 6 meeting were as follows.

AgroFresh Inc. (a subsidiary of Rohm and Haas Company)

George Hazelton, Toxicologist  
Kathy Krueger, Business Director  
Bob Larkin, Regulatory Director

BPPD

Roger Gardner  
Russell Jones  
Driss Benmhend  
Sheryl Reilly

The purpose of the meeting was to summarize the exposure and toxicology data that have been generated in support of the pending tolerance exemption petition for 1-methylcyclopropene (1-MCP), the active ingredient in EthylBloc Technology and SmartFresh™, and in support of the pending food use applications for EthylBloc Technology and SmartFresh™. The studies containing the data were subsequently hand delivered to the front end processing desk in Crystal Mall #2 on December 14, 2001. With this submission, all of the studies requested by BPPD in support of the above petition and registration applications have been completed.

The agenda and overheads presented at the December 6 meeting are attached. The information was well received by BPPD. AgroFresh was complimented for the



thoroughness of their efforts and for the approach utilized in assessing the risks of 1-MCP to workers and to consumers.

Timing for the review and approval process was discussed. AgroFresh's target is to initiate commercial sales for the 2002 apple harvest which begins in mid-August. Since printing of labels and obtaining of key state registrations will take a minimum of sixty days, we are requesting an expedited review and approval by BPPD by June 1, 2002. BPPD explained that they have a large backlog of work and could not commit to meet this target. They will try their best but stated that meeting the June 1 target will be a real stretch for them. AgroFresh requested that BPPD give first priority to approval of the newer 3.3% formulation of 1-MCP, brand name SmartFresh™.

Action Points:

1. AgroFresh to hand deliver studies to Front End Processing Desk (done – December 14, 2001).
2. D. Benmhend to send electronic template for tolerance approval to R. Larkin (done – December 7, 2001).
3. R. Larkin to send draft summary of meeting to D. Benmhend for agreement (done with this submittal).
4. R. Larkin to send D. Benmhend update of data matrix (done - March 6, 2002), Notice of Filing and labels for EthylBloc Technology and SmartFresh™.

Thank you for arranging the meeting. We appreciated the opportunity to discuss this novel and exciting technology. We are committed to provide any additional information to help expedite your review and approval process to make this technology available to the apple industry for the 2002 harvest.

Sincerely,



Robert H. Larkin  
Technical and Regulatory Director

enclosures

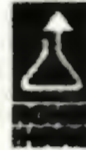


# Agenda

- Review technology
- Pending regulatory actions
- Additional information requested
- CMP study and residue study
- Update toxicology database and risk assessments
- Administrative information update
- Timelines for BPPD review/approval

2017. 2

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# **AgroFresh Inc.**

**a Rohm and Haas company**

2011 2

**November, 2001**

001



EthylBloc

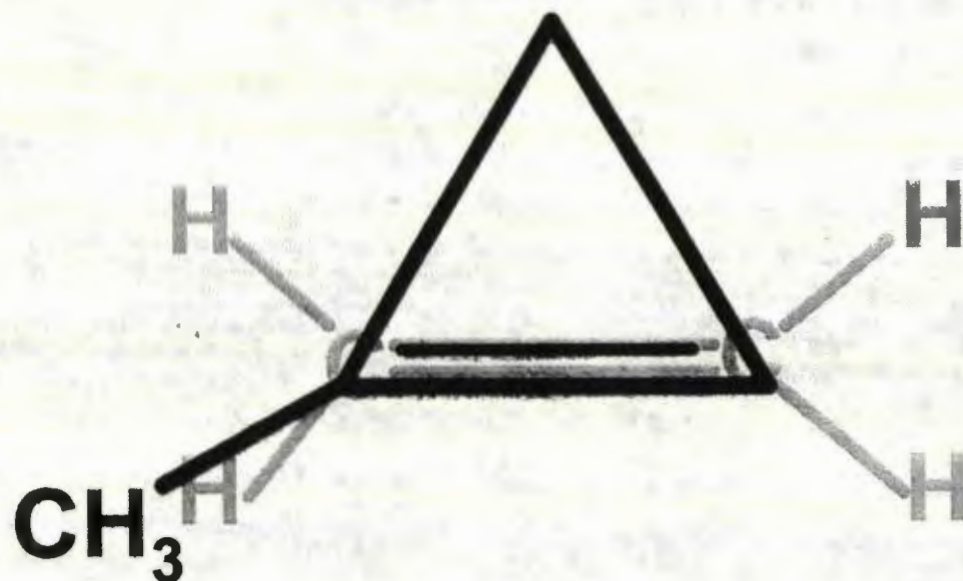
MCP 1 methylecyclopropene



MCP binds to the ethylene receptor site blocking its action



**EthylBloc®**



1-MCP: 1-methylcyclopropene

# EthylBloc<sup>®</sup> Product Concept

Extremely Low Use Rate

Banana and tropical fruit: 10–100 ppb

Pome fruit and vegetables: 100–1000 ppb

Applied as a Gas in a Sealed Storage Room or Shipping Container (Similar to Ethylene)

Gas Released From Powder by Adding Water, Buffer, or Surfactant

Single Exposure of 2–24 Hr Duration Depending on Release Temperature

Normal Storage or Shipping Conditions Applied After Exposure

## Formulations

- 0.14% MCP EthylBloc™

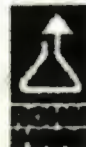
- 3.3% MCP SmartFresh™

- Other components are

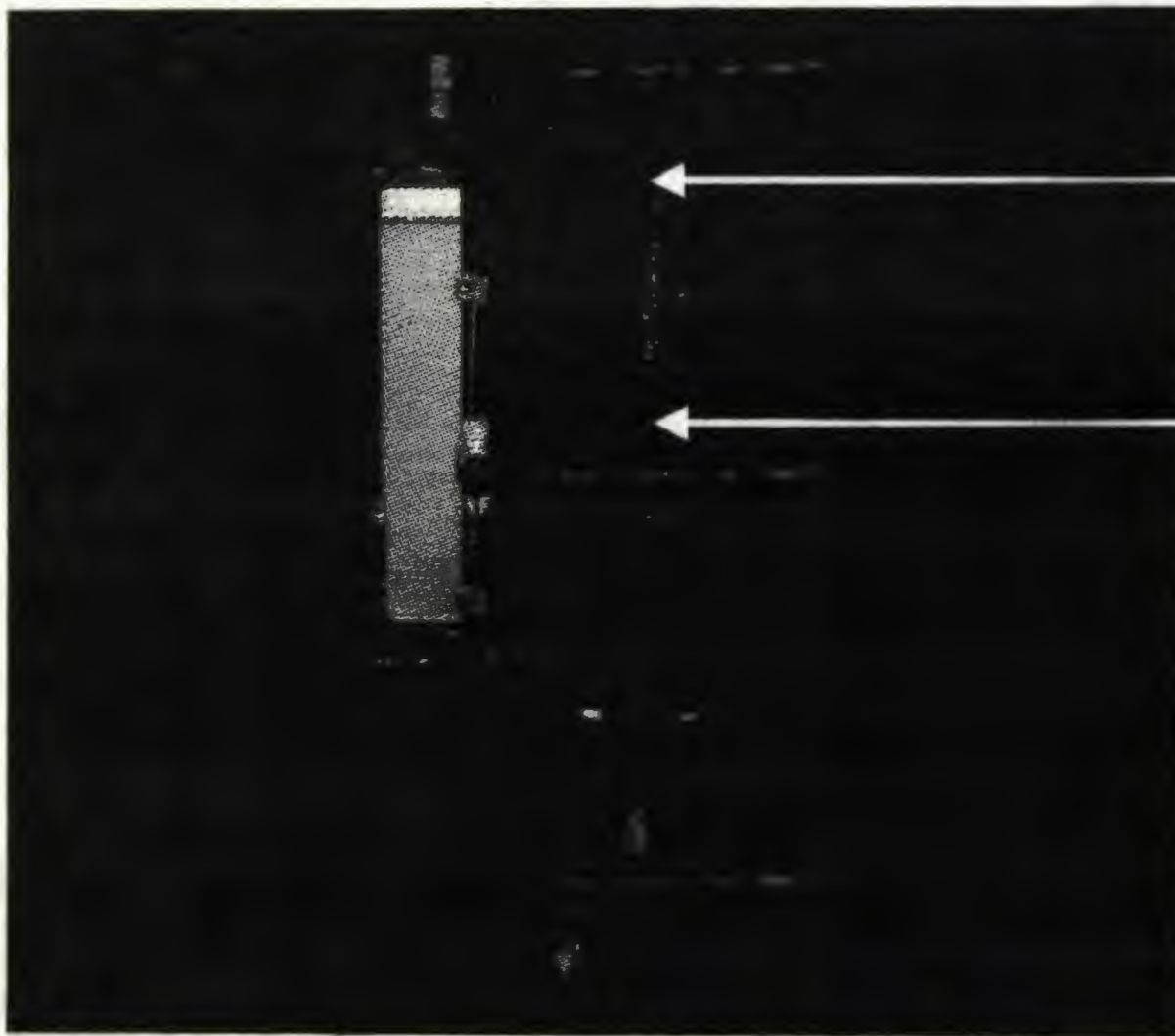
- Powder can be manually or automatically mixed with water to release 1-MCP

- AgroFresh, Inc. is subsidiary name, a subsidiary of Rohm and Haas Company





## SmartFresh™ Generator

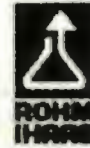


SmartFresh™ Released  
into Storage Room

Water + SmartFresh™  
Powder



**AgroFresh**  
A Rohn and Haas Company



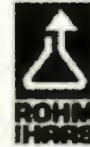
# Treating an Apple Room



SmartFresh  
Generator





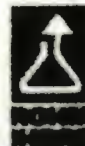


## **Treatment Procedure is Very Simple**

- Choose an apple storage room, such as a CA room, that is air-tight. Make sure the door can be sealed well. This insures that treatment will be efficacious.
- A SmartFresh generator is placed in the filled storage room.
- Water is added to the generator and it is turned on.
- Operator exits the room and seals the door.
- SmartFresh releases after operator exits the room.
- Treatment time is 18-24 hours, followed by opening the door to vent the room for 15 minutes.

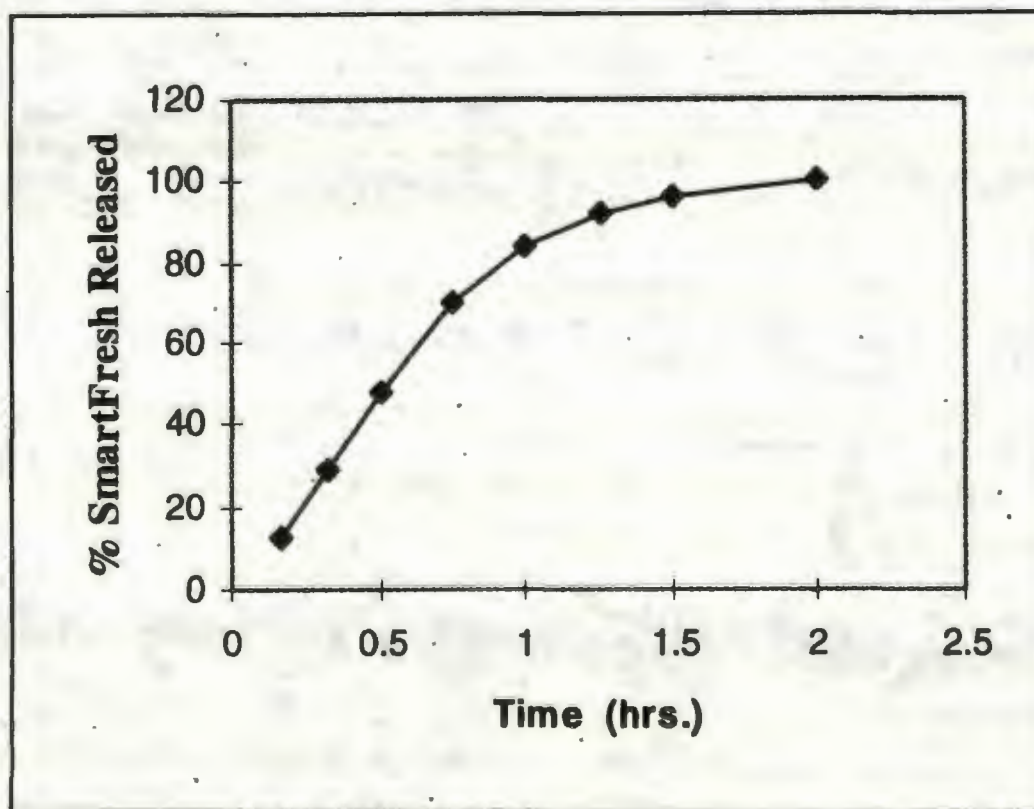






## Commercial Scale SmartFresh™ Release Profile

**Even at large scale, SmartFresh™ releases quickly to  
ensure uniform and complete treatment of fruit**



# Pending Actions

## Food Use

- Registration Application for EthylBloc Technology (0.14%) – submitted 4/6/2000
- Petition For Exemption From Tolerance for 1-MCP (OF 6144) – submitted 4/6/2000
- Registration of SmartFresh (3.3%) – submitted 6/28/2001



# Additional Information Requested

- Science Review dated February 21, 2001
- Residue study on apples
- Acute and subchronic inhalation studies on 1-MCP
- Analysis for CMP in treated storage chamber
- Mutagenicity studies on 1-MCP gas



# Status Of Additional Information

- Mutagenicity studies on 1-MCP gas submitted 4/6/2001
- Acute inhalation study on I-MCP gas submitted 4/6/2001
- Preliminary residue results submitted 4/6/2001
- Subchronic inhalation study, final residue report and CMP chamber study completed - to be submitted shortly

# CMP Chamber Study

- Empty tractor trailer used as surrogate treatment room
- 1-MCP released by prototype commercial generator
- Room air analyzed for 1-MCP and for CMP
- Ratio of CMP to 1-MCP determined to be the same as ratio in 1-MCP technical
- CMP concentration in room = 0.65 ppb



# Residue Study Background

- Theoretical maximum residue in apples = 9 ppb at 1000 ppb max use rate
- Targeted for detection limit of 1 ppb
- Below level of detection of conventional analytical techniques, therefore used C-14labeled 1-MCP



# Residue Study Design

- Four apple varieties - Gala, Fuji, Red Delicious, Golden Delicious
- Treatment chamber approximately one cubic meter
- Two temperatures – 0 and 20 degrees
- 1200 ppb treatment rate
- Sampling times out to 7 days after treatment

## Summary of Sample Residues

| Apple Variety | Average<br>residue<br>mg/kg | Min. Residue<br>mg/kg | Max. Residue<br>mg/kg | Number<br>of<br>Samples |
|---------------|-----------------------------|-----------------------|-----------------------|-------------------------|
|               |                             |                       |                       |                         |
| Red Delicious | 0.00341                     | 0.00114               | 0.00598               | 21                      |
| Gala          | 0.00510                     | 0.00224               | 0.00911               | 15                      |
| Granny Smith  | 0.00398                     | 0.00182               | 0.00737               | 12                      |
| Fuji          | 0.00324                     | 0.00142               | 0.00474               | 12                      |
| Overall       | 0.00391                     | 0.00114               | 0.00911               | 60                      |



# Residue Study

## Conclusions

- Average Residue for 8 treatments = 3.9 ppb
- Residue less than 40% of theoretical max
- Residue independent of temperature, variety, position in chamber, time after treatment
- Residue below detection limits of conventional analytical techniques and below level that can be identified
- Apples are worst case for magnitude of residue for proposed crops



|           | MAX<br>USE/RATE<br>PPB | MAX<br>USE/RATE<br>MG AI/M3 | PACK<br>DENSITY<br>KG/M3 | MAX<br>RESIDUE<br>PPB |
|-----------|------------------------|-----------------------------|--------------------------|-----------------------|
| CROP      |                        |                             |                          |                       |
| APPLE     | 1000                   | 2.24                        | 250                      | 8.96                  |
| PEARS     | 500                    | 1.12                        | 250                      | 4.48                  |
| AVOCADO   | 300                    | 0.67                        | 145                      | 4.63                  |
| MELONS    | 1000                   | 2.24                        | 257                      | 8.72                  |
| CUCUMBERS | 1000                   | 2.24                        | 250                      | 8.96                  |
| TOMATOES  | 500                    | 1.12                        | 225                      | 4.98                  |

# Information To Update?

- Tolerance Exemption Petition
- Notice of Filing
- Data Matrix
- Labels

## 1-Methylcyclopropene: Summary of Toxicology Studies

### Acute Toxicity Studies

3.3% a.i. Formulation (cyclodextran complex):

| Study                                              | Result                                                                  |
|----------------------------------------------------|-------------------------------------------------------------------------|
| Oral LD50 (rat)                                    | >5000 mg/kg (limit dose);<br>No clinical signs of toxicity.             |
| Dermal LD50 (rat)                                  | >5000 mg/kg (limit dose);<br>No clinical signs of toxicity. —           |
| Inhalation LC50 (rat)<br><u>"1-MCP gas tested"</u> | > 1126 ppm a.i. (or > 2.5 mg a.i./L);<br>No clinical signs of toxicity. |
| Skin Irritation (rabbit)                           | Mild irritation.                                                        |
| Eye Irritation (rabbit)                            | Mild irritation.                                                        |
| Dermal Sensitization (guinea pig)                  | Not a sensitizer, no labeling required.                                 |

**Conclusion:** 1-methylcyclopropene produces minimal to no acute toxicity.



## 1-Methylcyclopropene: Summary of Toxicology Studies

### Mutagenicity Studies

#### 1-methylcyclopropene (gas phase studies):

| Study                                                                                     | Result                   |
|-------------------------------------------------------------------------------------------|--------------------------|
| Ames Mutagenicity Assay (5 bacterial strains, tested as gas up to 1000 ppm a.i.)          | Negative (not mutagenic) |
| Mammalian Point Mutation Assay (CHO cells, tested as gas up to 1000 ppm a.i.)             | Negative (not mutagenic) |
| <i>In Vitro</i> Cytogenetics Assay (human lymphocytes, tested as gas up to 1000 ppm a.i.) | Negative (not mutagenic) |
| <i>In Vivo</i> Mouse Micronucleus Assay (tested up to 1000 ppm a.i., 6hr exposure)        | Negative (not mutagenic) |

**Supplemental Data:** 1-MCP was not mutagenic in Ames Assay and Mouse Lymphoma Forward Mutation Assay, when 1-MCP was suspended in cell media; and the compound was not mutagenic in *In Vivo* Mouse Micronucleus Assay, when 1-MCP complex was dosed orally by gavage.

**Conclusion:** 1-methylcyclopropene is not mutagenic.

## 1-Methylcyclopropene: Summary of Toxicology Studies (continued)

### Developmental Toxicity Study in the Rat

#### 1-Methylcyclopropene exposure by inhalation:

| Dose                                                                    | Findings                                                                                                                                                                                            |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 107 ppm a.i.; 0.24 mg a.i./L<br>[56 mg a.i./kg/day; 6 hr exposure/day]  | No maternal or developmental toxicity <sup>a</sup> ,<br><u>NOEL for maternal toxicity</u>                                                                                                           |
| 329 ppm a.i.; 0.72 mg a.i./L<br>[174 mg a.i./kg/day; 6 hr exposure/day] | No developmental toxicity <sup>a</sup> ,<br>Maternal toxicity: low incidence of enlarged spleens.                                                                                                   |
| 1029 ppm a.i.; 2.3 mg a.i./L<br>[543 mg a.i./kg/day; 6 hr exposure/day] | No developmental toxicity <sup>a</sup> ,<br><u>NOEL for developmental toxicity,<sup>a</sup></u><br>Maternal toxicity: minimal decrease in body weight gain, and high incidence of enlarged spleens. |

<sup>a</sup> No effects on fetal development and no evidence of soft tissue or skeletal malformations.

#### Conclusion:

1-methylcyclopropene does not produce developmental toxicity.

The No-Observable-Effect Level (NOEL) for maternal toxicity was 107 ppm (or 56 mg/kg/day) and is the toxicological endpoint for short term exposure.



## 1-Methylcyclopropene: Summary of Toxicology Studies

### Multiple Dose Study (3-Months) in the Rat

#### 1-Methylcyclopropene exposure by inhalation:

| Test Concentration (Dose)*                      | Findings                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24 ppm (0.05 mg/L)<br>[9-15 mg a.i./kg/day]     | No systemic toxicity <sup>b</sup> ,<br><u>NOEL for study.</u>                                                                                                                                                                                                                                                                                                   |
| 107 ppm (0.24 mg/L)<br>[39-66 mg a.i./kg/day]   | Effects on:<br><br>spleen histopathology <sup>a</sup> (related to anemia),<br>and<br><br>kidney histopathology <sup>b</sup> (related to<br>metabolism/excretion of 1-MCP).                                                                                                                                                                                      |
| 1031 ppm (2.3 mg/L)<br>[380-640 mg a.i./kg/day] | Effects on:<br><br>hematology parameters (mild regenerative<br>anemia);<br><br>spleen weight and histopathology <sup>a</sup> (related to<br>anemia);<br><br>kidney weight and histopathology <sup>b</sup> (related to<br>metabolism/excretion of 1-MCP); and<br><br>liver weight and histopathology <sup>c</sup> (related to<br>metabolism/excretion of 1-MCP). |

a- Spleen histopathology: yellow brown pigment, red pulp congestion, extramedullary hematopoiesis.

b- Kidney histopathology: intracytoplasmic eosinophilic structures and nuclear enlargement in epithelium of cortical tubules and pigment in these cells.

c- Liver histopathology: centrilobular hepatocellular hypertrophy.

**Conclusion:** The No-Observable-Effect Level (NOEL) for subchronic toxicity was 24 ppm (or 9-15 mg/kg/day) and is the toxicological endpoint for long term exposure.



### **1-Methylcyclopropene: Summary of Hazard Information**

- **No toxicity following acute exposure.**
- **Not mutagenic.**
- **Not a developmental toxicant.**
- **No toxicity to respiratory tract following single or multiple exposures.**
- **No evidence of neurotoxicity following single or multiple exposures.**
- **No effects on the pathology of any endocrine or reproductive organs following multiple exposures.**
- **Produces minimal to mild effects on hemopoietic system (mild regenerative anemia) and on organs related to metabolism/excretion of the compound (liver and kidney) following multiple exposures.**
- **No-Observable-Effect Levels (NOELs) for short term and long term exposures are 56 mg/kg/day and 9 to 15 mg/kg/day, respectively.**

## Estimate of Risk to Worker

$$\text{Hazard (toxicology endpoints)} \times \text{Exposure} = \text{Risk}$$

### 1. Toxicological endpoints:

**Parameters for rat:** Short term NOEL: 56 mg/kg/day, from developmental toxicity study, and assumes 300g rat inhales 0.2 L/min. for 360 min. and absorption factor of 1.0 {107,000 ppb or 0.24 mg/L}.

Long term NOEL: 9 mg/kg/day, from 3-month toxicity study, and assumes 440g rat inhales 0.2 L/min. for 360 min. and absorption factor of 1.0 {24,000 ppb or 0.053 mg/L}.

**Parameters for human:** 70 kg body weight.  
21 L/min. (10 M<sup>3</sup> per 8 hour day, activity light work).  
Exposure period of 15 or 240 min.  
Absorption factor of 1.0 (or 100% absorption).

### 2. Exposure:

Exposure modeling using EPA's Industrial Source Complex Dispersion Model.

Controlled atmosphere (CA) apple storage facility (1824 m<sup>3</sup>).

Maximum use concentration of 1000 ppb 1-MCP.

Following treatment of apples, room vented at rate of 0.75 air changes/hr.

Effect of air changes on 1-MCP concentration in CA room.

| Post-Venting Air Change (hr) | 1-MCP Conc. (ppb v/v) |
|------------------------------|-----------------------|
| 0 (0.0)                      | 1000                  |
| 1 (1.3)                      | 368                   |
| 2 (2.7)                      | 135                   |
| 3 (4.0)                      | 50                    |
| 4 (5.3)                      | 18                    |
| 5 (6.7)                      | 7                     |



## Estimate of Risk to Worker

**Evaluation of Margin of Safety (MOS) for the Worker:**

**MOS = Ratio of No-Observable-Effect Level (NOEL) to Exposure.**

**MOS for Worker Exposure should be >100.**

### Exposure Scenarios:

**Scenario #1: 15 minute accidental exposure to 1000 ppb conc. of 1-MCP.  
(i.e., maximum use rate).**

**1000 ppb equivalent to 0.0022 mg/L**

**0.0022 mg/L x 21 L/min. x 15 min. + 70 kg person = 0.0099 mg/kg**

**MOS: NOEL (short term) + exposure = 56 mg/kg + 0.0099 mg/kg = 5656**

**Scenario #2: 4 hour exposure to 50 ppb conc. of 1-MCP  
(i.e., worker spends ½ day in room exposed to residual  
levels of 1-MCP).**

**50 ppb equivalent to 0.00011 mg/L**

**0.00011 mg/L x 21 L/min. x 240 min. + 70 kg person = 0.00792 mg/kg**

**MOS: NOEL (long term) + exposure = 9 mg/kg + 0.00792 mg/kg = 1136**



### Estimate of Risk to Consumer (Dietary Exposure)

$$\text{Hazard (toxicology endpoints)} \times \text{Exposure} = \text{Risk}$$

1. Toxicological endpoints: Chronic dietary exposure- 9 mg/kg/day;  
Acute dietary exposure- 56 mg/kg/day.

2. Dietary Exposure: = Amount of Food Consumed X Residue in Food (<10 ppb).

#### *Amount of Food Consumed Determined:*

Food consumption (chronic and acute) was determined using Dietary Evaluation Estimation Model (DEEM), which incorporates food consumption values (1992-1996) for a number of population subgroups (i.e, adults, children, infants).

#### *Residue Data:*

#### **Summary of Residues of 1-MCP in Different Apple Varieties**

*[All values are adjusted for maximum use rate of 1000 ppm a.i. (v/v)]\**

| Apple Variety | Average residue<br>ppb | Min. Residue<br>ppb | Max. Residue<br>ppb | Number of<br>Samples |
|---------------|------------------------|---------------------|---------------------|----------------------|
| Red Delicious | 2.8                    | 1.0                 | 5.0                 | 21                   |
| Gala          | 4.3                    | 1.9                 | 7.6                 | 15                   |
| Granny Smith  | 3.3                    | 1.5                 | 6.1                 | 12                   |
| Fuji          | 2.7                    | 1.2                 | 4.0                 | 12                   |
| Overall       | 3.3                    | 1.0                 | 7.6                 | 60                   |

\*Residue studies were conducted using an application rate of 1200 ppm 1-MCP (v/v); however, the maximum use rate on the label will only be 1000 ppm 1-MCP (v/v). Residue values were adjusted using the following factor- 0.833 (or 1000/1200)<sup>18</sup>.

### Estimate of Risk to Consumer (Dietary Exposure)

10 ppb is a worst-case default for each food commodity, since the theoretical maximum residue concentration is 9 ppb or less.

#### Example (for apples):

Max. Residue Conc. = max. use rate (mg a.i./m<sup>3</sup>) + packing density (kg/M<sup>3</sup>)

Assumes all 1-MCP released ends up in apples.

Apples: 2.24 mg a.i./M<sup>3</sup> + 250 kg/M<sup>3</sup> = 0.0089 mg 1-MCP/kg apples (or 9 ppb)

#### Theoretical maximum residue concentration for each commodity:

| Commodity | Maximum use rate (ppb) | Maximum use rate (mg a.i./M <sup>3</sup> ) | Packing density (kg/M <sup>3</sup> ) | Maximum Residue (ppb) |
|-----------|------------------------|--------------------------------------------|--------------------------------------|-----------------------|
| Apples    | 1000                   | 2.24                                       | 250                                  | 9.0                   |
| Pears     | 500                    | 1.12                                       | 250                                  | 4.5                   |
| Avocadoes | 300                    | 0.67                                       | 145                                  | 4.6                   |
| Melons    | 1000                   | 2.24                                       | 257                                  | 8.7                   |
| Cucumbers | 1000                   | 2.24                                       | 250                                  | 9.0                   |

#### Assumptions for dietary risk calculations:

1. 10 ppb (or 0.01 mg/kg) was assumed for all the food commodities (i.e., apples, pears, avocadoes, melons and cucumbers).
2. 100% of all food commodities were treated with 1-MCP.
3. No loss of residue with storage or further processing and handling of the fruits or vegetables.



**Estimate of Risk to Consumer (Dietary Exposure)**

**Dietary Exposure = Amount of Food Consumed X Residue in Food (<10 ppb).**

**Margin of Safety (MOS) = Ratio of No-Observable-Effect Level (NOEL)  
to Exposure.**

**Total predicted *chronic* dietary exposure to 1-MCP:**

| <b>Population Subgroup</b> | <b>Total Exposure*<br/>(mg a.i./kg body wt./day)</b> | <b>Margin of Safety**</b> |
|----------------------------|------------------------------------------------------|---------------------------|
| Adults (U.S. population)   | 0.000018                                             | 500,000                   |
| All infants (<1 year)      | 0.000088                                             | 102,273                   |
| Nursing infants            | 0.000043                                             | 209,302                   |
| Non-nursing infants        | 0.000101                                             | 89,109                    |
| Children 1-6 years         | 0.000081                                             | 111,111                   |
| Children 7-12 years        | 0.000023                                             | 391,304                   |

\* Total exposure (chronic dietary) was determined by using food consumption values from DEEM Chronic analysis system and assuming a residue level of 10 ppb (or 0.01 mg/kg) for apples, pears, melons (all types), cucumbers and avocados.

\*\* Margin of safety- NOEL of 9 mg/kg/day divided by predicted total exposure.

**Total predicted *acute* dietary exposure to 1-MCP:**

| <b>Population Subgroup</b> | <b>99.9<sup>th</sup> Percentile<br/>Exposure*<br/>(mg a.i./kg body wt./day)</b> | <b>Margin of Safety**</b> |
|----------------------------|---------------------------------------------------------------------------------|---------------------------|
| Adults (U.S. population)   | 0.000711                                                                        | 78,762                    |
| All infants (<1 year)      | 0.001139                                                                        | 49,166                    |
| Nursing infants            | 0.000944                                                                        | 59,322                    |
| Non-nursing infants        | 0.001138                                                                        | 49,209                    |
| Children 1-6 years         | 0.001109                                                                        | 50,496                    |
| Children 7-12 years        | 0.000405                                                                        | 138,272                   |

\* The 99<sup>th</sup> percentile exposure (acute dietary) was determined by using food consumption values from DEEM acute analysis system and assuming a residue level of 10 ppb (or 0.01 mg/kg) for apples, pears, melons (all types), cucumbers and avocados.

\*\* Margin of safety- NOEL of 56 mg/kg/day divided by predicted total exposure.



## Worker Risk to 3-Chloro-2-methylpropene

### 3-Chloro-2-methylpropene (CMP):

- Raw material in the synthesis of 1-methylcyclopropene (1-MCP).
- CMP is weakly mutagenic.
- CMP was carcinogenic in laboratory animal studies (i.e., in the forestomach of rats and mice, CMP produced squamous cell papillomas and/or carcinomas at 150 and 100 mg/kg/day, respectively, when administered by oral gavage.
- CMP is present in 1-MCP at no more than 0.08%.
- Recent experiments have verified that a treatment room containing 1000 ppb v/v 1-MCP will contain a maximum of only 0.8 ppb v/v of the impurity, CMP.

### Exposure scenario:

A worker may be accidentally exposed for 15 minutes to a maximum 1000 ppb 1-MCP or a concentration of 0.8 ppb of CMP (equivalent to 0.000003 mg/L).

### Exposure:

$$0.000003 \text{ mg/L} \times 21 \text{ L/min.} \times 15 \text{ min.} + 70 \text{ kg person} = 0.0000135 \text{ mg/kg}$$

### Margin of Safety:

$$100 \text{ mg/kg} + 0.0000135 \text{ mg/kg} = \underline{\underline{>7,000,000}}$$

### Conclusion:

There is minimal to no exposure to CMP, and thus negligible risk to workers from CMP when treating rooms with 1-MCP.

DP BARCODE: D281146

CASE: 063215  
SUBMISSION: S610458

DATA PACKAGE RECORD  
BEAN SHEET

DATE: 02/25/02  
Page 1 of 1

\* \* \* CASE/SUBMISSION INFORMATION \* \* \*

CASE TYPE: REGISTRATION ACTION: 306 RESUBMISSION  
CHEMICALS: 224459 Cyclopropene,1-methyl- (7CI,8CI,9CI) (CA INDEX NAM 0.1400%  
ID#: 071297-00001 ETHYLBLOC  
COMPANY: 071297 AGRO FRESH INC.  
PRODUCT MANAGER: 90 JANET ANDERSEN 703-308-8128 ROOM: CS1 5TH FL  
PM TEAM REVIEWER: DRISS BENMHEND 703-308-9525 ROOM: CS1 5TH FL  
RECEIVED DATE: 02/12/02 DUE OUT DATE: 08/11/02

\* \* \* DATA PACKAGE INFORMATION \* \* \*

DP BARCODE: 281146 EXPEDITE: Y DATE SENT: 02/25/02 DATE RET.: / /  
CHEMICAL: 224459 Cyclopropene,1-methyl- (7CI,8CI,9CI) (CA INDEX NAME)  
DP TYPE: 001

|               | CSF: Y |    | LABEL: Y |     |
|---------------|--------|----|----------|-----|
| ASSIGNED TO   | DATE   | IN | DATE     | OUT |
| DIV : BPPD    | /      | /  | /        | /   |
| BRAN: BPPD-IO | /      | /  | /        | /   |
| SECT: IO      | /      | /  | /        | /   |
| REVR :        | /      | /  | /        | /   |
| CONTR:        | /      | /  | /        | /   |

ADMIN DUE DATE: 07/15/02  
NEGOT DATE: / /  
PROJ DATE: / /

\* \* \* DATA REVIEW INSTRUCTIONS \* \* \*

Attached, you will find new data submitted in support of the tolerance exemption and food use amendment of the product EthylBloc containing the active ingredient 1-Methylcyclopropene (MCP).

The following studies are attached:

1. Three Month Inhalation Tox. Study (in 2 volumes)  
MRID #456090-01
2. Apple Residue Study MRID #456090-02
3. Determination of 3-Chloro-2-Methylpropene  
Concentration in Chamber Treated with MCP MRID #  
456090-03
4. Assessment of Worker and Consumer Risk MRID  
#456090-04

Please review and comment

Thanks

Driss

\* \* \* DATA PACKAGE EVALUATION \* \* \*

No evaluation is written for this data package

\* \* \* ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION \* \* \*

| DP BC | BRANCH/SECTION | DATE OUT | DUE BACK | INS | CSF | LABEL |
|-------|----------------|----------|----------|-----|-----|-------|
|-------|----------------|----------|----------|-----|-----|-------|

S. Reilly

BPPD PRAT ACTION CODING FORM

PM 90: Janet Andersen

REGISTRANT/COMPANY NAME:

ROHM and HAAS

Fast Track: Yes ☐ No ☒

Reviewer DLISS

Assigned by LH 2/16/02

EPA REG./FILE SYMBOL

21297-1

ACTION CODE

306

[Note: If Fast Track, you may  
need to change Reviewer's

Name in PRAT.]

86-5

(New A.I./EUP'S/Tolerances: Yes ☐ No ☐)

Corrected Resubmission

DATE OF APPLICATION

2/8/02

EPA RECEIVED DATE

2/12/02

BPPD RECEIVED DATE

2/14/02

SUBMISSION BARCODE

5610450

ASSIGNED IN PRAT: Yes ☒ No ☐

COMPLETED BY

LH

DATE

2/16/02

LOGGED IN BRATS: Yes ☒ No ☐

DATE 2/15/02

COMPLETED BY

ep

RAL RECEIVED

DATE

(RAL Initials)

\*\*\*\*\*  
FINAL ACTION

RESPONSE CODE: \_\_\_\_\_

RESPONSE DATE: \_\_\_\_\_

MOS: \_\_\_\_\_

(1) Cite All

(4) Not Applicable

(8) Selective

CRP

Restricted Use:

Manufacturing Use:

Exclusive Use:

Yes ☐

No ☐

Yes ☐

No ☐

Yes ☐

No ☐

Yes ☐

No ☐





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

DRISS

308-9525

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

FEB - 6 2001

Mr. Robert Larkin  
727 Norristown Road  
P. O. Box 904  
Springhouse, PA 19477

Subject: Pending Application EPA #71297-1 dated December 14, 2001  
1-MCP Residues on Food commodities (Petition OF 06144)

Dear Mr. Larkin:

All data submitted to the Agency to support registration actions must conform to a standard format, organization, and other requirements described in Pesticide Registration Notice (PRN) 86-5 dated July 29, 1986. This notice was mailed to all registrants on record with the Agency at that time and is currently available on the Internet ([www.epa.gov/PR\\_Notices/](http://www.epa.gov/PR_Notices/)).

All incoming data are screened for compliance with the PR Notice. Data that are in compliance are assigned Master Record Identification Numbers (MRIDs), microfilmed and forwarded for appropriate action. Data that do not comply with the requirements of the Notice are not admitted into the system. Such data must be brought into compliance with the PR Notice before the data can be given further consideration in support of the regulatory action for which the data were submitted.

The data submitted in connection with the proposed action listed above have been found deficient with respect to the requirements of PRN 86-5. The deficiencies are identified in the enclosed comments from the Information Services Branch of the Program Management and Support Division.

Biopesticides and Pollution Prevention Division will hold associated documents for 75 days to give opportunity to resubmit the supporting data in acceptable form. If you have not done so by that time, the application and other associated documents may be administratively withdrawn from further consideration without notice to you, in accordance with policies established by PR Notice 75-4 dated August 27, 1975.

Should you wish to pursue the registration of your product after the application has been withdrawn you will have to submit a complete new application.

If you choose to resubmit your data you should enclose a copy of this letter and the enclosure to identify the data as a corrected resubmission of data previously found deficient with respect to PRN 86-5. Only resubmit those items of data for which no MRID numbers were assigned. If any of your previous items was assigned an MRID number, do not resubmit that particular item of data, but simply refer to it by title and by the assigned MRID number.

Should you have any questions, please feel free to contact Mr. Driss Benmhend at (703) 308-9525.

Sincerely,

Sheryl K. Reilly, Ph.D., Chief  
Biochemical Pesticides Branch  
Biopesticides and Pollution Prevention  
Division (7511C)

Enclosure



FEB 21 2002

U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs

AGROFRESH, INC./ROHM AND HAAS COMPANY  
100 INDEPENDENCE MALL WEST  
PHILADELPHIA, PA 19106

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 12/14/01. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.



This an ACCEPTED submission

90

This is a PARTIALLY ACCEPTED/COMPLETELY REJECTED submission

~~DRSS~~

**Administrative**

**Materials**

REPLY TO:  
RESEARCH LABORATORIES  
727 NORRISTOWN ROAD, P.O. BOX 904  
SPRING HOUSE, PA 18477-0904  
(215) 641-7000 FAX (215) 641-7857



February 8, 2002

Ms. Linda Hollis  
BPPD  
US Environmental Protection Agency  
1921 Jefferson Davis Highway  
CM-2  
Arlington, VA 22202

Dear Ms. Hollis:

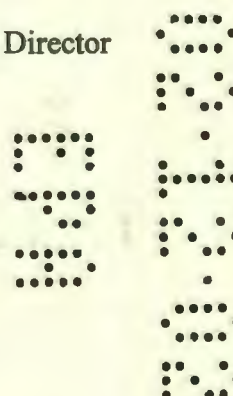
Re: EthylBloc Technology (EPA Registration No. 71297-1)  
SmartFresh (EPA File Symbol 71297-E)  
Corrected resubmission of data in response to Sheryl K. Reilly letter  
dated February 6, 2002 (enclosed)

Enclosed are corrected pages with the proper statement of confidentiality claims for the four studies identified as Rejected study (01), (02), (03) and (04) in the February 6 letter from Sheryl Reilly (enclosed). Each of these pages should replace the existing page 2 in each of the reports. The existing pages can be discarded. The replacement pages can be associated with the appropriate study by the study number at the top of each page. Thank you for your help.

Sincerely,

Robert H. Larkin, Ph.D.  
Technical and Regulatory Director

enclosures





U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs

AGROFRESH, INC./ROHM AND HAAS COMPANY  
100 INDEPENDENCE MALL WEST  
PHILADELPHIA, PA 19106

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 12/14/01. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

We are unable to accept your data submittal for further processing and review, because of the significant deficiencies noted below. It is being returned to you for correction. If deficiencies were found which apply to your overall submission, they are described immediately following this paragraph. If problems are found with individual studies, they are described below linked to the study identifier found on the enclosed copy of your bibliography.

Rejected study [01] :

- \* You failed to sign the statement of data confidentiality claims included in the study.

Rejected study [02] :

You must include one of the two acceptable statements of data confidentiality claims under FIFRA section 10(d)(1)(A), (B), or (C) as the second element in each study. The language of two alternative forms of the Statement of Data Confidentiality Claims, shown in Attachment 3 of PR Notice 86-5, cannot be altered. See pages 8 and 13 of the Notice.

Rejected study [03] :

You must include one of the two acceptable statements of data confidentiality claims under FIFRA section 10(d)(1)(A), (B), or (C) as the second element in each study. The language of two alternative forms of the Statement of Data Confidentiality Claims, shown in Attachment 3 of PR Notice 86-5, cannot be altered. See pages 8 and 13 of the Notice.

Rejected study [04] :

You must include one of the two acceptable statements

of data confidentiality claims under FIFRA section 10(d)(1)(A), (B), or (C) as the second element in each study. The language of two alternative forms of the Statement of Data Confidentiality Claims, shown in Attachment 3 of PR Notice 86-5, cannot be altered. See pages 8 and 13 of the Notice.





December 14, 2001

Document Processing Desk  
Office Of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biopesticides and Pollution Prevention Division  
Room 266A, Crystal Mall #2  
1021 Jefferson Davis Highway  
Arlington, VA 22202-4501

Dear Mr. Benmhend:

Subjects: EthylBloc Technology (EPA Registration No. 71297-1)  
SmartFresh (EPA File Symbol 71297-E)  
Active ingredient = 1-Methylcyclopropene (1-MCP)

Petition for Exemption From the Requirements of a Tolerance for  
1-MCP residues on Food Commodities (Petition OF 06144)

Response To February 21, 2001 Science Review (Russel S. Jones to  
Driss Benmhend)

In the February 21, 2001 Science Review (Russel S. Jones to Driss Benmhend), a number of additional studies were requested to support the petition for a tolerance exemption for 1-MCP on food commodities and to support the proposed label amendment to EthylBloc Technology (EPA Registration No. 71297-1) to extend the use of 1-MCP to include food uses. Many of these studies were submitted previously (letter of April 6, 2001, S. Longacre to Driss Benmhend).

The final three studies requested in the February 21 Science Review are being submitted (three copies of each) with this letter. The studies are:

1. Rohm and Haas Company Report No. 00R-183, 1-Methylcyclopropene: 3-month Inhalation (Whole-body) Toxicity Study In Rats, J. S. Ferguson, E. M. Anderson and H. J. Bernacki, Jr, October 19, 2001.
2. Rohm and Haas Technical Report No. AF-01-141, C-14 -1-Methylcyclopropene (1-MCP) Apple Residue Study, Dennis Verona, December 12, 2001.
3. AgroFresh Memorandum No. 01-143, Determination of 3-Chloro-2-Methylpropene Concentration in Chamber Treated with 1-Methylcyclopropene, Bret A. Snyder and Bridget M. Stevens, December 4, 2001.



In addition a report containing a revised risk assessment for 1-MCP for consumers and workers is also being submitted at this time.

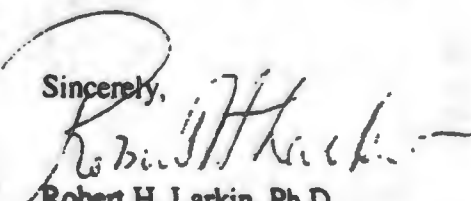
4. Rohm and Haas Company Report No. 01R-1071, 1-Methylcyclopropene (1-MCP): Assessment of Worker and Consumer Risk, G.A. Hazelton, November 26, 2001.

The results of these four studies, combined with the results from the previously submitted studies, demonstrate that there are very large margins of safety associated with the proposed food uses of 1-MCP for both workers and consumers.

We believe that the data submitted previously and currently with this letter fully support approval of an exemption from tolerance for food use for 1-MCP and the approval for registration for use of 1-MCP for indoor use on harvested fruits and vegetables. We request that the Agency expeditiously review these studies and approve the associated petition for exemption from tolerance and grant the registrations so that this valuable product is available for use is available for use for the 2002 harvest season.

Please contact me if you have any questions or need any further information. I am available for discussion either by phone (215-641-7397) or in person.

Sincerely,

  
Robert H. Larkin, Ph.D.  
Technical and Regulatory  
Director

REPLY TO:  
RESEARCH LABORATORIES  
727 NORRISTOWN ROAD, P.O. BOX 904  
SPRING HOUSE, PA 19477-0904  
(215) 841-7000 FAX (215) 841-7857



December 14, 2001

Document Processing Desk  
Office Of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biopesticides and Pollution Prevention Division  
Room 266A, Crystal Mall #2  
1021 Jefferson Davis Highway  
Arlington, VA 22202-4501

Dear Mr. Benmhend:

Subjects: EthylBloc Technology (EPA Registration No. 71297-1)  
SmartFresh (EPA File Symbol 71297-E)  
Active ingredient = 1-Methylcyclopropene (1-MCP)

Petition for Exemption From the Requirements of a Tolerance for  
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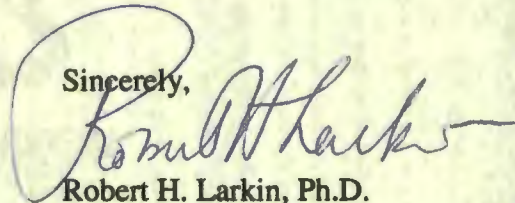
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The results of these four studies, combined with the results from the previously submitted studies, demonstrate that there are very large margins of safety associated with the proposed food uses of 1-MCP for both workers and consumers.

We believe that the data submitted previously and currently with this letter fully support approval of an exemption from tolerance for food use for 1-MCP and the approval for registration for use of 1-MCP for indoor use on harvested fruits and vegetables. We request that the Agency expeditiously review these studies and approve the associated petition for exemption from tolerance and grant the registrations so that this valuable product is available for use is available for use for the 2002 harvest season.

Please contact me if you have any questions or need any further information . I am available for discussion either by phone (215-641-7397) or in person.

Sincerely,



Robert H. Larkin, Ph.D.  
Technical and Regulatory  
Director



Mr. Driss Benmhend  
Biopesticides and Pollution Prevention Division  
U. S. Environmental Protection Agency  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

*Well done -  
I can't see  
any discrepancies  
Sheryl*

Dear Mr. Benmhend:

Re: December 6, 2001 Preregistration Meeting  
EthylBloc Technology (EPA Registration No. 71297-1)  
SmartFresh (EPA File Symbol 71297- E)

The attendees of the December 6 meeting were as follows.

AgroFresh, Inc. (a subsidiary of Rohm and Haas Company)

George Hazelton, Toxicologist  
Kathy Krueger, Business Director  
Bob Larkin, Regulatory Director

BPPD

Roger Gardner  
Russell Jones  
Driss Benmhend  
Sheryl Reilly

The purpose of the meeting was to summarize the exposure and toxicology data that have been generated in support of the pending tolerance exemption petition for 1-methylcyclopropene (1-MCP), the active ingredient in EthylBloc Technology and SmartFresh, and in support of the pending food use applications for EthylBloc Technology and SmartFresh. The studies containing the data were subsequently hand delivered to the front end processing desk in Crystal Mall #2 on December 14, 2001. With this submission, all of the studies requested by BPPD in support of the above petition and registration applications have been completed.

The agenda and overheads presented at the December 6 meeting are attached. The information was well received by BPPD. AgroFresh was complimented for the thoroughness of their efforts and for the approach utilized in assessing the risks of 1-MCP to workers and to consumers.

Timing for the review and approval process was discussed. AgroFresh's target is to initiate commercial sales for the 2002 apple harvest which begins in mid-August. Since printing of labels and obtaining of key state registrations will take a minimum of sixty days, we are requesting an expedited review and approval by BPPD by June 1, 2002. BPPD explained that they have a large backlog of work and could not commit to meet

this target. They will try their best but stated that meeting the June 1 target will be a real stretch for them. AgroFresh requested that BPPD give first priority to approval of the newer 3.3% formulation of 1-MCP, brand name SmartFresh.

**Action Points:**

1. AgroFresh to hand deliver studies to Front End Processing Desk (done - December 14, 2001).
2. D. Benmhend to send electronic template for tolerance approval to R. Larkin (done - December 7, 2001).
3. R. Larkin to send draft summary of meeting to D. Benmhend for agreement (done with this submittal).
4. R. Larkin to send D. Benmhend update of data matrix, Notice of Filing and labels for EthylBloc Technology and SmartFresh.

Thank you for arranging the meeting. We appreciated the opportunity to discuss this novel and exciting technology. We are committed to provide any additional information to help expedite your review and approval process to make this technology available to the apple industry for the 2002 harvest.

Sincerely,

Robert H. Larkin  
Regulatory Director

**James Hollins**

01/18/02 11:14 AM

To: Driss Benmhend/DC/USEPA/US@EPA  
cc: Sheryl Reilly/DC/USEPA/US@EPA  
Subject: Re: Inquiries [ ]

Driss,

I could not find a record of receipt for the two submissions you inquired about. If they were mailed through the postal system, they are probably still in Ohio getting irradiated. If they were sent by courier, under the names you listed, we have no record. Agri-Fos's submission must have been mailed, because 12/22/01 was on a Saturday.

Jim

Driss Benmhend

**Driss Benmhend**

01/18/02 09:36 AM

To: James Hollins/DC/USEPA/US@EPA  
cc: Sheryl Reilly/DC/USEPA/US@EPA  
Subject: Inquiries

I would like to know if you have the following submissions:

1. AgroFresh Co. EPA Reg. #: 71297-1 or Petition (0F6144). Applicant claims that they submitted data to FRP on 12/14/01
2. Agri-Fos Reg # 71962-R. According to the applicant submission was done on 12/22/01

Thanks for your assistance

Driss Benmhend  
United States Environmental Protection Agency  
Biopesticides and Pollution Prevention Division  
Biochemical Pesticides Branch  
(703) 308-9525  
E-mail: benmhend.driss@epa.gov





editorial@fedweek.co  
m

01/30/02 01:57 PM  
Please respond to  
Mike Causey Column  
Readers

To: Driss Benmhend/DC/USEPA/US@EPA  
cc:  
Subject: Your Social Security & Medicare Benefits

Date: Wednesday, January 30, 2002  
To: All Federal Agencies and Employees  
RE: Your Social Security and Medicare Benefits

\*\*\*\*\*

The Social Security/Medicare Handbook for Federal  
Agencies, Employees & Retirees--Only \$9.95  
<http://www.fedweek.com/Publications/default.asp>

This comprehensive easy-to-follow guide is NOT a  
Dot Com download, government handout or pamphlet.  
It is a professionally printed publication that  
was written by our veteran team of experts with  
over 50 years of experience on your pay and  
benefits. Please continue reading...

\*\*\*\*\*

Dear Federal Employee:

Social Security and Medicare are easily the two most  
misunderstood benefits that federal employees, postal  
workers and retirees have. In years past, these employees  
didn't really need to know too much about these programs  
because they were under a separate retirement and disability  
benefits package, the Civil Service Retirement System,  
and didn't stand to get benefits from Social Security.  
Social Security and Medicare, largely were for somebody  
else--not them.

Not anymore. All that changed several years ago and these  
big changes in the benefits picture are just now hitting  
home for many federal employees and postal workers. With  
Social Security and Medicare now playing so important a  
role in your financial future, you can no longer afford to  
ignore them. It's vital that you understand just what types  
of benefits you're accumulating, what level of benefits you  
stand to receive, what provisions might reduce or even  
eliminate them, and how they interact with your other  
benefits--in sum, how to best position yourselves to get the  
most out of these two key programs.

Again, never before has there been such a huge need for this  
information. That's why FEDweek has published its new Social  
Security/Medicare Handbook for Federal Employees  
& Retirees. Until now, there has never been a comprehensive,  
easy-to-understand handbook for federal employees and  
retirees that fully explains not only those programs but

also how they dovetail (and, in some cases, conflict) with the federal government's retirement and health insurance programs. Take a look at a partial table of contents for this all-new handbook:

## Section I: Social Security

Overview

Earning Credits

Credit for Military Service

Calculating Benefits

The Windfall Elimination Provision

The Government Pension Offset

Social Security's Role In Federal Retirement Benefits

Social Security's Role in Federal Retirement Decisions

Family Benefits

Survivors Benefits

Social Security Disability Benefits

Social Security and Federal Retirement Disability Benefits

Supplemental Security Income

After Benefits Begin

The Earnings Test

Taxation of Social Security Benefits

Administrative Matters and Resources

## Section II: Medicare

Overview

FEHB and Medicare

Medicare Part A

Medicare Part B

Managed Care (HMOs)

'Medigap' Policies

Private Fee-for-Service Plans

Rights, Protections and Appeals

Frequently Asked Questions

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\*\*\*\*\*

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United States Environmental Protection Agency

FEB 6 2002

Mr. Robert Larkin  
727 Norristown Road  
P. O. Box 904  
Springhouse, PA 19477

Subject: Pending Application EPA #71297-1 dated December 14, 2001  
1-MCP Residues on Food commodities (Petition OF 06144)

Dear Mr. Larkin:

All data submitted to the Agency to support registration actions must conform to a standard format, organization, and other requirements described in Pesticide Registration Notice (PRN) 86-5 dated July 29, 1986. This notice was mailed to all registrants on record with the Agency at that time and is currently available on the Internet ([www.epa.gov/PR\\_Notices/](http://www.epa.gov/PR_Notices/)).

All incoming data are screened for compliance with the PR Notice. Data that are in compliance are assigned Master Record Identification Numbers (MRIDs), microfilmed and forwarded for appropriate action. Data that do not comply with the requirements of the Notice are not admitted into the system. Such data must be brought into compliance with the PR Notice before the data can be given further consideration in support of the regulatory action for which the data were submitted.

The data submitted in connection with the proposed action listed above have been found deficient with respect to the requirements of PRN 86-5. The deficiencies are identified in the enclosed comments from the Information Services Branch of the Program Management and Support Division.

Biopesticides and Pollution Prevention Division will hold associated documents for 75 days to give opportunity to resubmit the supporting data in acceptable form. If you have not done so by that time, the application and other associated documents may be administratively withdrawn from further consideration without notice to you, in accordance with policies established by PR Notice 75-4 dated August 27, 1975.

CONCURRENCES

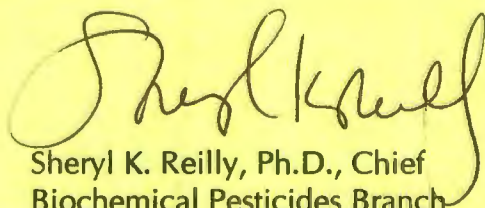
|           |         |        |  |  |  |  |  |
|-----------|---------|--------|--|--|--|--|--|
| SYMBOL ▶  | 7511C   | 7511C  |  |  |  |  |  |
| SURNAME ▶ | Pollard | Ruby   |  |  |  |  |  |
| DATE ▶    | 2/6/02  | 2/6/02 |  |  |  |  |  |

Should you wish to pursue the registration of your product after the application has been withdrawn you will have to submit a complete new application.

If you choose to resubmit your data you should enclose a copy of this letter and the enclosure to identify the data as a corrected resubmission of data previously found deficient with respect to PRN 86-5. Only resubmit those items of data for which no MRID numbers were assigned. If any of your previous items was assigned an MRID number, do not resubmit that particular item of data, but simply refer to it by title and by the assigned MRID number.

Should you have any questions, please feel free to contact Mr. Driss Benmhend at (703) 308-9525.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sheryl K. Reilly', written in a cursive style.

Sheryl K. Reilly, Ph.D., Chief  
Biochemical Pesticides Branch  
Biopesticides and Pollution Prevention  
Division (7511C)

Enclosure



DEC 21 2001

U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs

AGROFRESH, INC./ROHM AND HAAS COMPANY  
100 INDEPENDENCE MALL WEST  
PHILADELPHIA, PA 19106

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 12/14/01. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

We are unable to accept your data submittal for further processing and review, because of the significant deficiencies noted below. It is being returned to you for correction. If deficiencies were found which apply to your overall submission, they are described immediately following this paragraph. If problems are found with individual studies, they are described below linked to the study identifier found on the enclosed copy of your bibliography.

Rejected study [01] :

- \* You failed to sign the statement of data confidentiality claims included in the study.

Rejected study [02] :

You must include one of the two acceptable statements of data confidentiality claims under FIFRA section 10(d)(1)(A), (B), or (C) as the second element in each study. The language of two alternative forms of the Statement of Data Confidentiality Claims, shown in Attachment 3 of PR Notice 86-5, cannot be altered. See pages 8 and 13 of the Notice.

Rejected study [03] :

You must include one of the two acceptable statements of data confidentiality claims under FIFRA section 10(d)(1)(A), (B), or (C) as the second element in each study. The language of two alternative forms of the Statement of Data Confidentiality Claims, shown in Attachment 3 of PR Notice 86-5, cannot be altered. See pages 8 and 13 of the Notice.

Rejected study [04] :

You must include one of the two acceptable statements

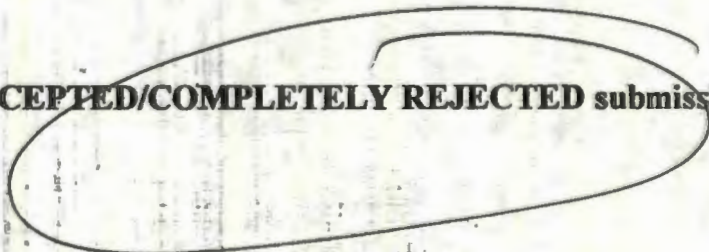


of data confidentiality claims under FIFRA section 10(d)(1)(A), (B), or (C) as the second element in each study. The language of two alternative forms of the Statement of Data Confidentiality Claims, shown in Attachment 3 of PR Notice 86-5, cannot be altered. See pages 8 and 13 of the Notice.

This an ACCEPTED submission

BPPD  
#71297-1  
#71297-E

This is a PARTIALLY ACCEPTED/COMPLETELY REJECTED submission



 Sheryl Reilly

06/11/01 04:35 PM

To: Driss Benmhend/DC/USEPA/US@EPA

cc:

Subject: Final Rule : Temp. tol. ex. from a NOF for a permanent exemption

Driss, here is a note from OGC regarding a situation sim. to what we discussed this a.m.  
Do you think we could do this for MCP?

Sheryl

----- Forwarded by Sheryl Reilly/DC/USEPA/US on 06/11/2001 04:34 PM -----

 Suzanne Krolikowski

05/18/2001 03:14 PM

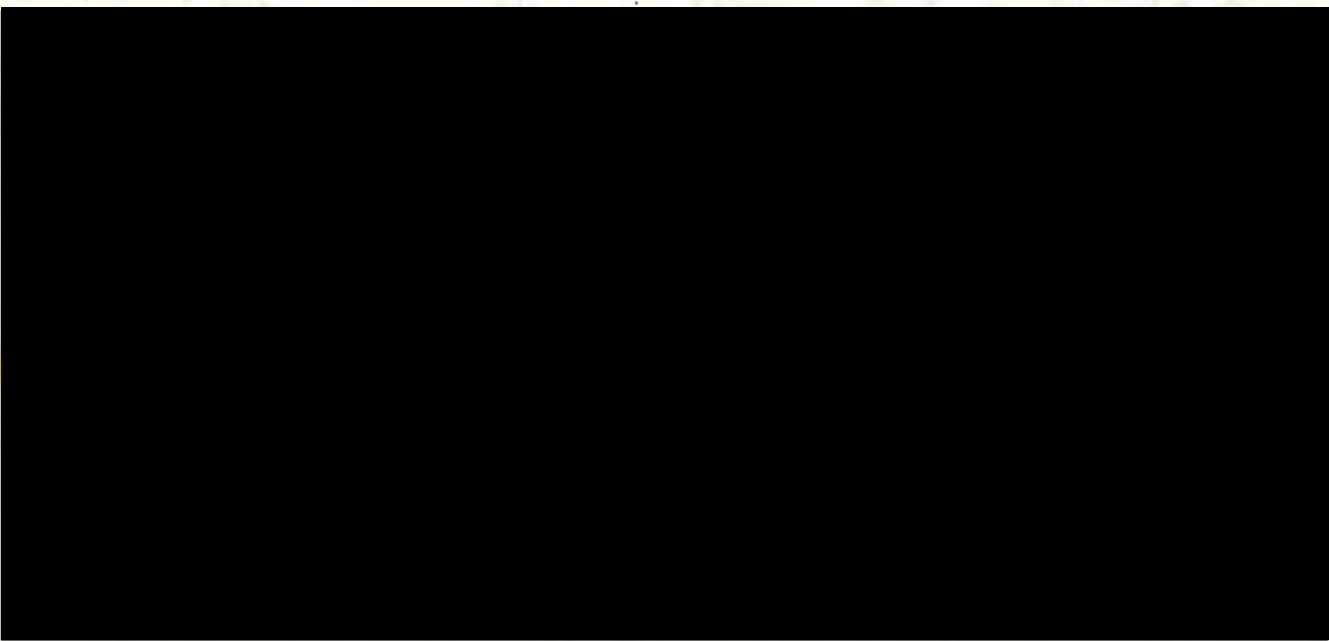
To: Sheryl Reilly/DC/USEPA/US@EPA

cc: Carol Frazer/DC/USEPA/US@EPA

Subject: Re: LPE Final Rule? 

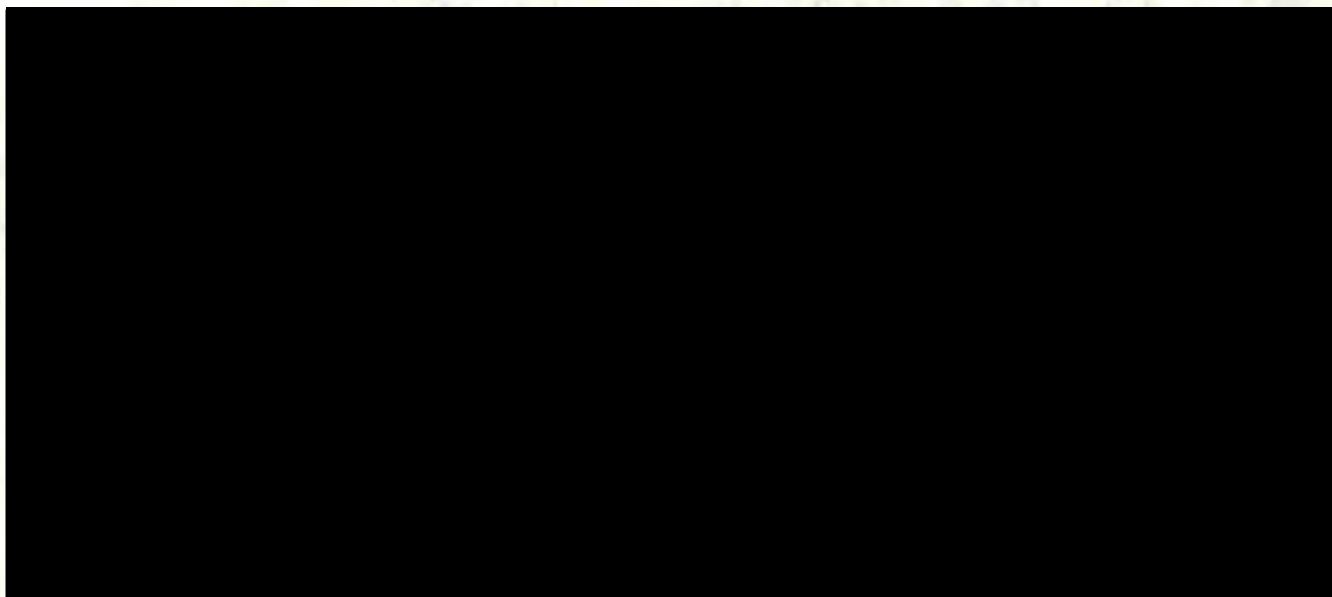
***Attorney-Client Advice  
Privileged and Confidential  
Do Not Disclose***

Sheryl:







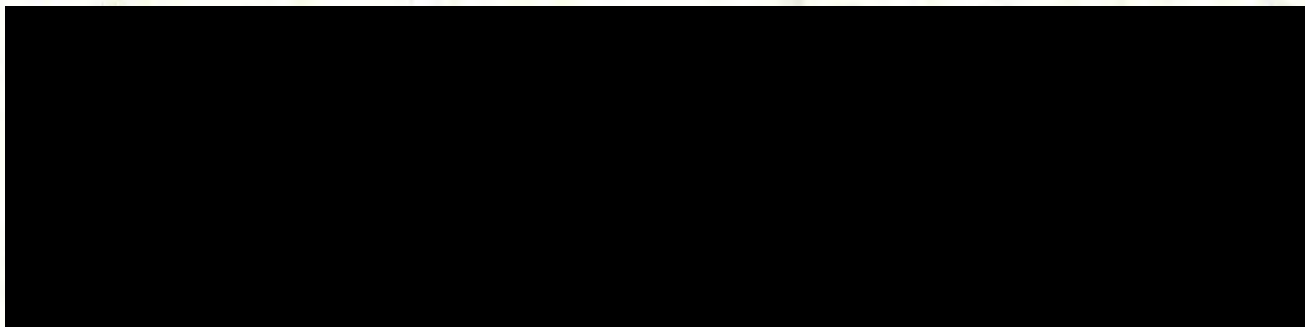


Suzanne Krolkowski  
(202) 564-5632  
EPA's Office of General Counsel

Sheryl Reilly

Sheryl Reilly  
05/18/2001 08:06  
AM

To: Suzanne Krolkowski/DC/USEPA/US@EPA  
cc: Carol Frazer/DC/USEPA/US@EPA  
Subject: LPE Final Rule?



Sheryl

----- Forwarded by Sheryl Reilly/DC/USEPA/US on 05/18/2001 08:03 AM -----

Carol Frazer  
05/17/2001 05:01 PM

To: Sheryl Reilly/DC/USEPA/US@EPA  
cc:  
Subject: LPE Final Rule?

Sheryl,



Carol





Suzanne Krolikowski

04/25/01 05:20 PM


To: Mike Mendelsohn/DC/USEPA/US@EPA

cc: Driss Benmhend/DC/USEPA/US@EPA, Janet

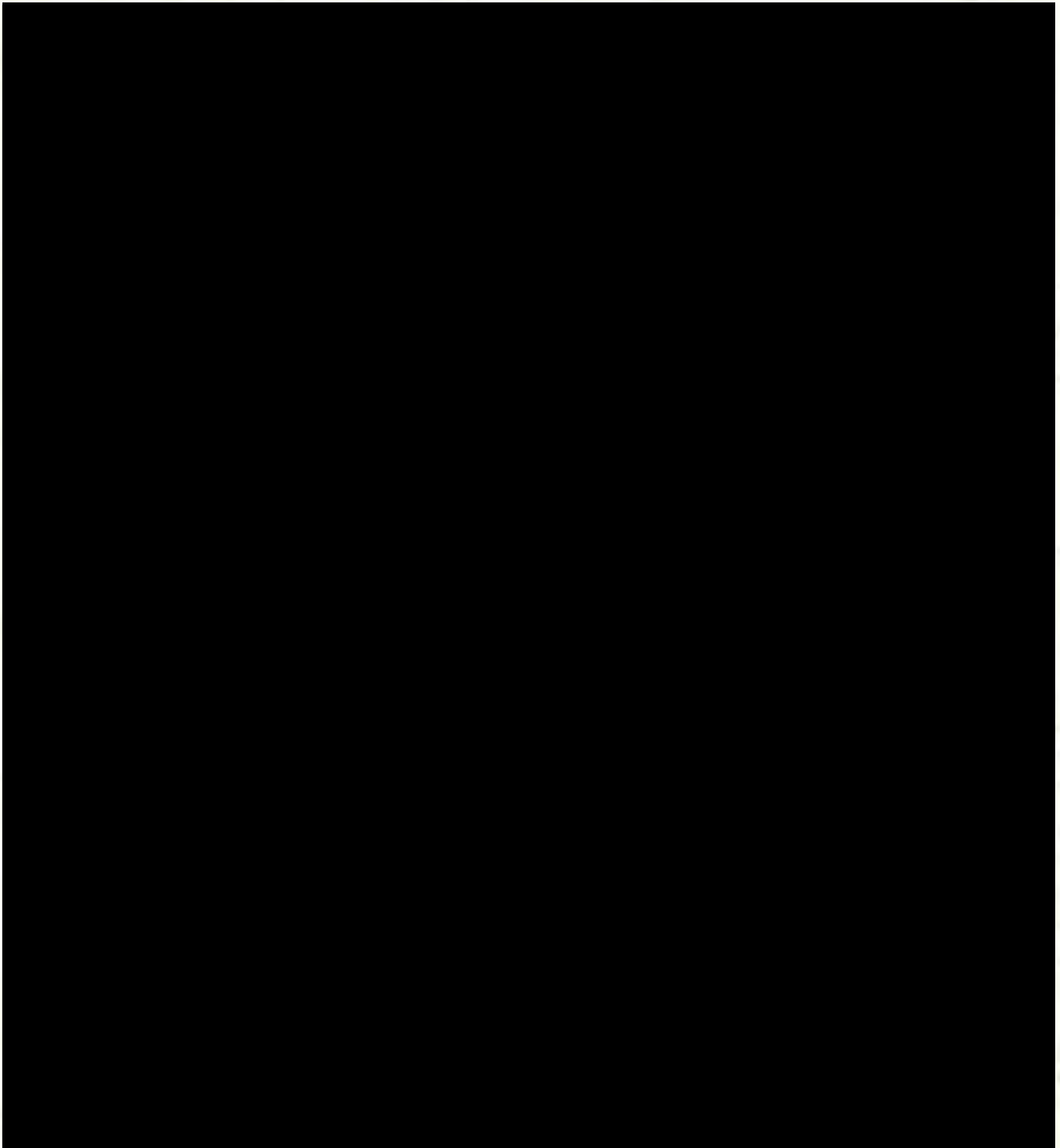
Andersen/DC/USEPA/US@EPA, Roger Gardner/DC/USEPA/US@EPA,

Russell Jones/DC/USEPA/US@EPA, Sheryl

Reilly/DC/USEPA/US@EPA

Subject: Re: REVISED VERSION: Question about tolerance exemption 

*Attorney-Client Advice  
Do Not Disclose*




[REDACTED]

Suzanne Krolikowski  
(202) 564-5632  
EPA's Office of General Counsel

Mike Mendelsohn

 Mike Mendelsohn  
04/20/01 07:21 AM


To: Suzanne Krolikowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Janet  
Andersen/DC/USEPA/US@EPA, Roger Gardner/DC/USEPA/US@EPA,  
Russell Jones/DC/USEPA/US@EPA, Sheryl  
Reilly/DC/USEPA/US@EPA  
Subject: Re: REVISED VERSION: Question about tolerance exemption 


Suzanne,

[REDACTED]

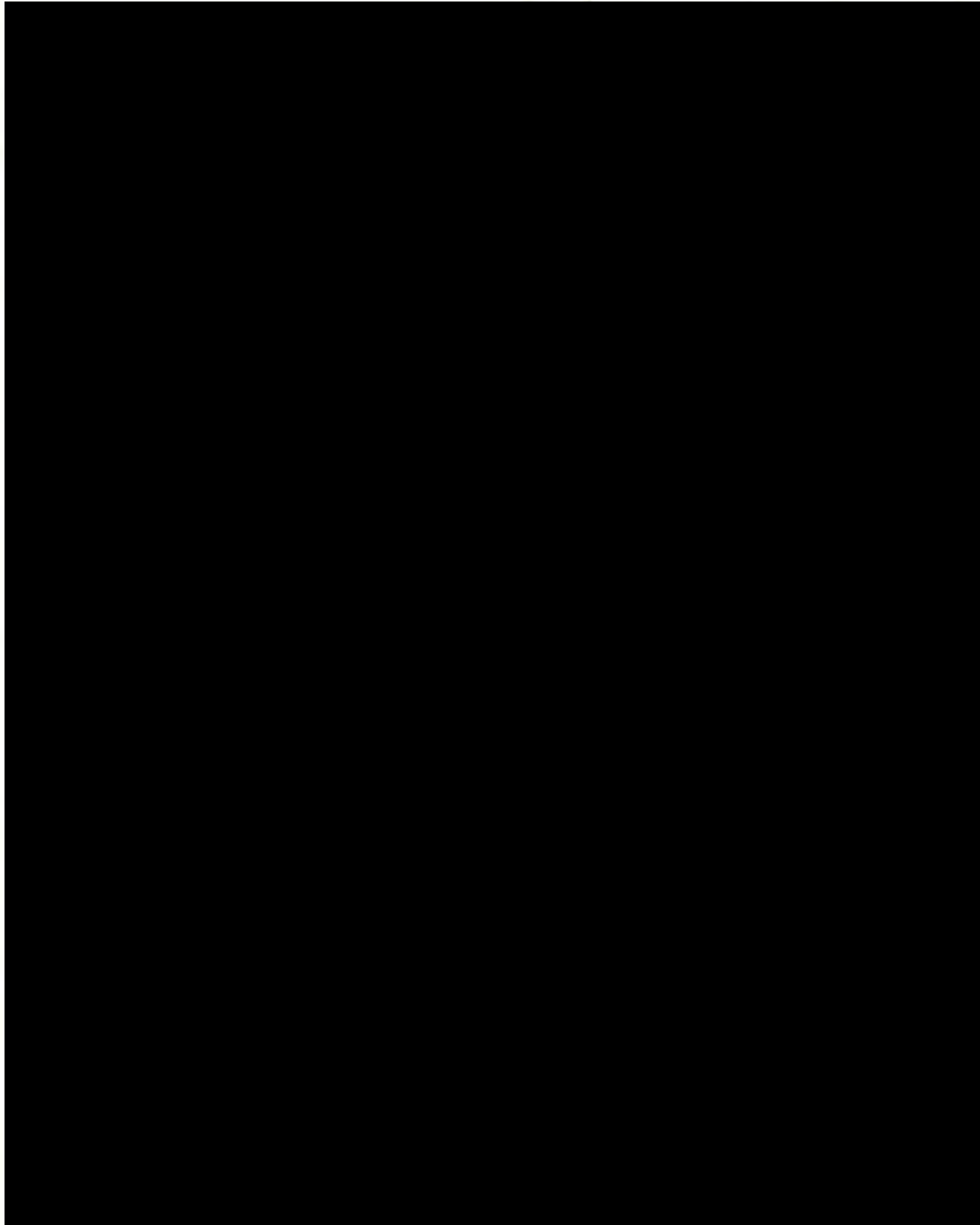
Mike

Suzanne Krolikowski

 Suzanne Krolikowski  
04/19/2001 07:46 PM

To: Sheryl Reilly/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Janet  
Andersen/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell Jones/DC/USEPA/US@EPA  
Subject: Re: REVISED VERSION: Question about tolerance exemption 

*Attorney-Client Advice  
Do Not Disclose*

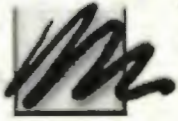


Suzanne Krolikowski  
(202) 564-5632



EPA's Office of General Counsel

Sheryl Reilly



Sheryl Reilly

04/19/2001 09:40 AM


To: Suzanne Krolkowski/DC/USEPA/US@EPA

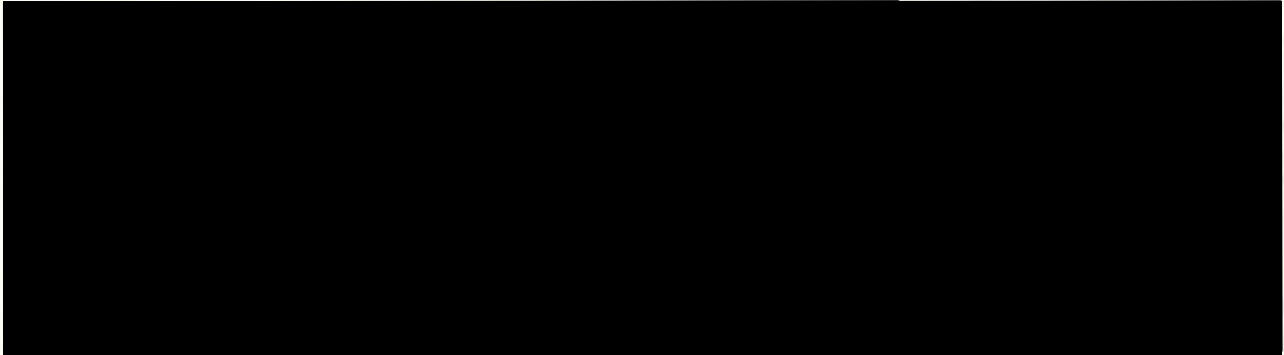
cc: Driss Benmhend/DC/USEPA/US@EPA, Janet

Andersen/DC/USEPA/US@EPA, Mike

Mendelsohn/DC/USEPA/US@EPA, Roger

Gardner/DC/USEPA/US@EPA, Russell Jones/DC/USEPA/US@EPA

Subject: Re: REVISED VERSION: Question about tolerance exemption 



Thanks,  
Sheryl

OCT 22 2001

Attached You Will Find the Index of Documents Submitted Under Docket # 30514

Pesticide Product, Registration Application

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**\*When Comments are Received, A Copy of the Comments Will be Enclosed.**

**Contact the Docket Staff if There are any Questions: (703) 305-5805**

**\*Comments Enclosed: (Yes) ☒ (No) ☐**

Pesticide Product, Registration  
Applications  
OPP #30514

| NUM  | DATE     | LNAME                  | AFFIL        | TITLE                                                                                                                                                                | PAGES | DOC<br>TYPE |
|------|----------|------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
| 0001 | 09/19/01 | Brenmhend/Rey<br>nolds | EPA          | Pesticide<br>Product<br>Registration<br>Application (FR<br>Notice)                                                                                                   | 4     | A           |
| 0002 | 03/28/01 | Alphin                 | Valent       | Florbac Lurry<br>Biological<br>Application for<br>Registration                                                                                                       | 12    | A           |
| 0003 | 03/28/01 | Wang                   | Valent       | Physical and<br>Chemical<br>Properties of<br>VBC-60008, MRID<br>#453756-01 ("C"<br>Document - See<br>Docket Staff)                                                   | 25    | C           |
| 0004 | 05/09/96 | Nair                   | Valent       | HPLC Assay for<br>B-Toxin oin<br>Florbac Strain<br>NB200 Technical<br>Powder, MRID<br>#453756-02 ("C"<br>Document - See<br>Docket Staff)                             | 12    | C           |
| 0005 | 05/08/95 | Sietske de<br>Noer     | Novo Nordisk | Florbac Tech<br>Batch BEB 003<br>Intratracheal<br>Toxicity.....<br>MRID<br>#453756-03 ("C"<br>Documents - See<br>Docket Staff)                                       | 85    | C           |
| 0006 | 06/24/94 | Harde                  | Novo Nordisk | Bt susp. aizawai<br>- Acute Oral<br>Toxicity/Pathoge<br>nicity Study in<br>Rats Dosed<br>Florbac Tech,<br>MRID #453756-04<br>("C" Document -<br>See Docket<br>Staff) | 42    | C           |



Pesticide Product, Registration  
Applications  
OPP #30514

| NUM  | DATE     | LNAME              | AFFIL                     | TITLE                                                                                                                                                                          | PAGES | DOC<br>TYPE |
|------|----------|--------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
| 0007 | 06/06/94 | Jacobsen           | Scantox                   | Florbac Tech -<br>Acute Dermal<br>Toxicity in the<br>Rat, MRID<br>#453756-05<br>("C" Document -<br>See Docket<br>Staff)                                                        | 13    | C           |
| 0008 | 08/16/95 | Harde              | Novo Nordisk              | BT subs. aizawai<br>- Acute<br>Intravenous<br>Toxicity<br>/Pathogenicity<br>Study in Rats<br>Dosed Florbac<br>Tech, MRID<br>#453756-06 ("C"<br>Document - See<br>Docket Staff) | 41    | C           |
| 0009 | 03/08/95 | Sietske de<br>Boer | Novo Nordisk              | Florbac Tech<br>Batch BEB 0035 -<br>Primary Skin<br>Irritation Skin<br>Rabbits, MRID<br>#453756-07 ("C"<br>Document - See<br>Docket Staff)                                     | 11    | C           |
| 0010 | 01/13/95 | Sietske de<br>Boer | Novo Nordisk              | Florbac Tech,<br>Batch BEB 0035<br>Eye Irritation<br>in Rabbits,<br>MRID<br>#453756-08 ("C"<br>Document - See<br>Docket Staff)                                                 | 14    | C           |
| 0011 | 03/21/95 | Campbell           | Wildlife<br>International | Florbac Tech: An<br>Avian Oral<br>Pathogenicity<br>and Toxicity<br>Study in the<br>Northern<br>Bonwhite, MRID<br>#453756-09 ("C"<br>Document - See<br>Docket                   | 41    | C           |

Staff)

Pesticide Product, Registration  
Applications  
OPP #30514

| NUM  | DATE     | LNAME    | AFFIL                            | TITLE                                                                                                                                                                       | PAGES | DOC<br>TYPE |
|------|----------|----------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
| 0012 | 03/21/95 | Campbell | Wildlife<br>International        | Florbac Tech: An<br>Avian Oral<br>Pathogenicity<br>and Toxicity<br>Study in the<br>Mallard, MRID<br>#453756-10 ("C"<br>Document - See<br>Docket Staff)                      | 44    | C           |
| 0013 | 09/08/04 | Memmert  | RCC<br>Umweltchemie<br>GmbH & Co | Chronic Toxicity<br>and<br>Pathogenicity of<br>Florbac<br>Tech.....<br>MRID<br>#453756-11 ("C"<br>Documents - See<br>Docket Staff)                                          | 40    | C           |
| 0014 | 09/08/94 | Memmert  | RCC<br>Umweltchemie<br>GmbH & Co | Influence pf<br>Florbac Tech. on<br>Survival and<br>Reproduction of<br>Daphnia Magna<br>in a Semistatic<br>Test, MRID<br>#453756-12 ("C"<br>Document - See<br>Docket Staff) | 32    | C           |
| 0015 | 06/02/95 | Palmer   | Wildlife<br>International        | Dietary<br>Pathogenicity<br>and Toxicity<br>Study<br>w/Parasitic<br>Hymenoptera,<br>MRID #453756-13<br>("C" Document-<br>See Docket<br>Staff)                               | 28    | C           |
| 0016 | 06/02/95 | Palmer   | Wildlife<br>International        | Florbac Tech:<br>Dietary<br>Pathogenicity<br>and Toxicity<br>Study w/the<br>Ladybird<br>Beetle, MRID                                                                        | 31    | C           |



#453756-14 ("C"  
Document - See  
Docket Staff)

Pesticide Product, Registration  
Applications  
OPP #30514

| NUM  | DATE     | LNAME     | AFFIL                     | TITLE                                                                                                                                                           | PAGES | DOC<br>TYPE |
|------|----------|-----------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
| 0017 | 06/02/95 | Palmer    | Wildlife<br>International | Florbac Tech:<br>Dietary<br>Pathogenicity<br>and Toxicity<br>Study w/Green<br>Lacewing<br>Larvae, MRID<br>#453756-15 ("C"<br>Document - See<br>Docket Staff)    | 29    | C           |
| 0018 | 06/02/95 | Palmer    | Wildlife<br>International | Florbac Tech:<br>Dietary<br>PATHogenicity<br>and Toxicity<br>Study w/the<br>Honey Bee, MRID<br>#453756-16 ("C"<br>Document - See<br>Docket Staff)               | 30    | C           |
| 0019 | 06/25/01 | Tinsworth | Novigen                   | Registration<br>Application for<br>a New Active<br>Ingredient<br>Amplify Sprout<br>Inhibitor.....M<br>RID #454388-00<br>(C"C Document -<br>See Docket<br>Staff) | 3     | C           |
| 0020 | 02/12/01 | San       | BioReliance               | InVitro<br>Mammalian Cell<br>Gene Mutation<br>Test, MRID<br>#454388-01 ("C"<br>Document -<br>See Docket<br>Staff)                                               | 35    | C           |
| 0021 | 06/25/01 | Polakoff  | Platte<br>Chemical Co.    | Summary Report:<br>Amplify<br>(2,6-DIPN)<br>1999-2000<br>Experimental Use<br>Permit,<br>MRID #454388-02<br>("C Document -                                       | 8     | C           |

See Docket  
Staff)



Page No. 5  
10/22/01

Pesticide Product, Registration  
Applications  
OPP #30514

| NUM  | DATE     | LNAME                    | AFFIL                                    | TITLE                                                                                                                                     | PAGES | DOC<br>TYPE |
|------|----------|--------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|
| 0022 | 06/15/01 | Novigen<br>Sciences, Inc | Novigen                                  | Amplify Sprout<br>Inhibitor<br>Technical.....MR<br>ID #454388-03<br>("C" Document -<br>See Docket<br>Staff)                               | 6     | C           |
| 0023 | 06/25/01 | Polakoff                 | Novigen<br>Sciences                      | Chronic and<br>Acute Dietary<br>Risk Assessment:<br>2,6-DIPN on<br>Potatoes,<br>MRID #454388-01<br>("C" Document<br>-See Docket<br>Staff) | 84    | C           |
| 0024 | 10/12/01 | Jensen                   | Washington<br>State Potato<br>Commission | Pesticide<br>Product<br>Registration<br>Application (FR<br>Notice)                                                                        | 2     | A           |
| 0025 | 10/19/01 | Olberding                | National<br>Potato Council               | Comments Re:<br>Pesticide<br>Product<br>Registration<br>Application DIPN<br>(Amplify)                                                     | 3     | A           |

\*\*\* Total \*\*\*

675

PESTICIDE REGISTRATION ACTION TRACKING (PRAT) -- Action Codes  
Printed 1/20/95 Revised 05/10/94 [FB]  
(previous rev.10/93)

A. Registration (Registration Division use only)

- 010 - New Chemical Screening
  - 011 - Resubmission
- 015 - First Food Use Screening
  - 016 - Resubmission
- 100 - Application for Registration - New Chemical - Food or Feed
  - 101 - Resubmission
- 110 - Application for Registration - AmD - New Chemical - Non-Food or Non-Feed Use\*\*
  - 111 - Resubmission
- 115 - Application for Registration - New Chemical - Non-Food or Non-Feed Use
  - 116 - Resubmission
- 117 - Proposed Test Protocol - New Chemical
  - 118 - Resubmission
- 130 - Application for Registration - New Biological - Food or Feed Use
  - 131 - Resubmission
- 145 - Application for Registration - New Biological - Non-Food or Non-Feed Use
  - 146 - Resubmission
- 152 - Proposed Test Protocol - New Biological
  - 153 - Resubmission
- 157 - Data Waiver Request - New Biological
  - 158 - Resubmission
- \*160 - Application for Registration - Routine "Me-Too" (Use 165 if HED/EFED review required)
  - \*161 - Resubmission
- 163 - Data Waiver Request - Old Chemical
  - 164 - Resubmission
- 165 - Application for Registration - Old Chemical (Minor changes, i.e, substantial change in percentage of active ingredients, inerts, etc.) Requires HED/EFED review.
  - 166 - Resubmission

\*PRAT Action Codes subject to FIFRA'88 45/90 day time requirements.

\*\*Action Codes subject to FQPA timeframe goals for antimicrobials.

- 167 - Nitrosamine Data - Old Chemical
- 168 - Resubmission
- 170 - Application for Registration - Old Chemical - "Me-Too"  
with an Additional Use (Use 175 if HED/EFED review  
required)
- 171 - Resubmission
- 172 - Application for Registration - AmD - Old Chemical -  
New Product - Routine "Me-Too" \*\*
- 173 - Resubmission
- 175 - Application for Registration - Old Chemical - New Use -  
Non-Food or Non-Feed - Requires HED/EFED review.
- 176 - Resubmission
- 177 - Proposed Test Protocol - Old Chemical
- 178 - Resubmission
- 180 - Application for Registration - Old Chemical - First New  
Food or Feed Use
- 181 - Resubmission
- 184 - Application for Registration - AmD - New Uses - New Product -  
Old Chemical - New Non-food or Non-feed Use \*\*
- 185 - Resubmission
- 186 - Application for Registration - AmD - Old Chemical - New  
Product - Old Chemical Minor Change \*\*
- 187 - Resubmission
- 188 - Application for Registration - AmD - Old Chemical - New  
Product - Old Chemical "Me-Too" W/Additional Use \*\*
- 189 - Resubmission
- 192 - Proposed Test Protocol - New Use
- 193 - Resubmission
- 194 - Action Init. by Agency - Add'l. Request
- 195 - Resubmission

- - - - -  
B. Tolerance Petition/Inert Ingredient Clearance  
(Registration Division use only)

- 200 - "E" Petition - Minor Use (IR-4/State)
- 201 - Resubmission
- 202 - Amendment
- 203 - Resubmission/Amendment
- 205 - "E" Petition (not IR-4) - Inerts (establish or exemption)
- 206 - Resubmission
- 207 - Amendment



PRAT Action Codes

Revised 10/18/93

- 210 - "E" Petition (not IR-4) - Minor Use  
211 - Resubmission
- 212 - "E" Petition (not IR-4) - Minor Use Amendment  
213 - Resubmission
- 220 - "E" Petition - Imports Only  
221 - Resubmission
- 222 - "E" Petition - Imports Only Amendment  
223 - Resubmission
- 230 - "F" Petition - Raw Agricultural Commodity  
231 - Resubmission
- 232 - Amendment "F" Petition-Raw Agri.Comm-Substantive (With Data)  
233 - Resubmission - w/ Data
- 234 - Amendment "F" Petition-Raw Agri.Comm-Non-Subst (No Data)  
235 - Resubmission - No Data
- 240 - "G" Petition - Temporary Tolerance  
241 - Resubmission
- 242 - Amendment "G" Petition - Temporary Tolerance  
243 - Resubmission
- 246 - Renewal/Extension Request  
247 - Resubmission
- 250 - "H" Petition - Food Additive  
251 - Resubmission
- 252 - Amendment "H" Petition - Food Additive  
253 - Resubmission
- 260 - "H" Petition - Temporary Food Additive Petition  
261 - Resubmission
- 262 - Amendment "H" Petition - Temporary Food Additive Petition  
263 - Resubmission
- 266 - Renewal/Extension "H" Petition - Temporary Food Additive  
267 - Resubmission
- 268 - General Correspondence - Tolerances  
269 - Resubmission
- 270 - Inert Ingredient Clearance Request  
271 - Resubmission
- 272 - Inerts DCI Submission (if moved from list 2 to 1)

PRAT Action Codes

Revised 10/18/93

273 - Resubmission

274 - Inert Data Waiver Request

275 - Resubmission

C. Amendments (Registration Division only) - - - - -

\*300- Amendment - Label Revision - Administrative (No data  
required, name change, etc.)

\*301 - Resubmission

\* PRAT Action Codes subject to the FIFRA'88 45/90 day time  
requirements

302 - Amendment - AmD - Administrative - Label Revision - No Data  
Required\*\*

303 - Resubmission

305 - Amendment - Technical - Label Revision - Data Required (i.e.,  
change in toxicity category, etc.) Use 320 if HED/EFED  
review required.

306 - Resubmission

307 - Amendment - AmD - Technical - Label Revision - Data  
Required\*\*

308- Resubmission

\*310 - Amendment - Technical - Added "Me-Too" Use (Use 325 if  
HED/EFED review required)

\*311 - Resubmission

312 - Amendment - AmD - Technical - Added "Me-Too" Use\*\*

313 - Resubmission

315 - Amendment - New Use - Non-Food or Non-Feed

316 - Resubmission

317 - Amendment - AmD - New Uses - New Non-Food or New Non-Feed  
Use\*\*

318 - Resubmission

320 - Amendment - Label revision - Data required - Requires  
HED/EFED review.

321 - Resubmission

322 - Amendment - AmD - Label Revision - Data Required - Requires  
Scientific Review\*\*

323 - Resubmission



PRAT Action Codes

Revised 10/18/93

- 325 - Amendment - Added "Me-too" use - Data required - requires HED/EFED review.  
326 - Resubmission
- 327 - Amendment - AmD - Added "Me-Too" Use - Data Required - Requires Scientific Review\*\*  
328 - Resubmission
- 330 - Amendment - Technical - New Use - Food or Feed (Use 370/371 if first food or feed use for chemical)  
331 - Resubmission
- 332 - Amendment - AmD - Notification\*\*  
333 - Resubmission
- 335 - Use Deletions  
336 - Resubmission
- 341 - Amendment - AmD - Formula Change - Unregistered Source of Active Ingredient\*\*  
342 - Resubmission
- \*345 - Amendment - Technical - Formula Change - (Use 347 if HED/EFED review required.  
\*346 - Resubmission
- 347 - Amendment - Formula Change - Unregistered source of the active ingredient. (Requires HED/EFED review)  
348 - Resubmission
- 350 - General Correspondence - Registration  
351 - Resubmission
- 352 - Proposed Test Protocol - Amendments  
353 - Resubmission
- 354 - Lab Audit Program - Data Review  
355 - Resubmission
- 356 - Label Improvement Program - Notification  
357 - Resubmission
- 358 - Classification by Regulation (Agency Initiated)  
359 - Resubmission
- \* PRAT Action Codes subject to the FIFRA'88 45/90 day time reqs.
- 360 - Action Initiated by Agency - Registration & Amendment  
361 - Resubmission



PRAT Action Codes

Revised 10/18/93

- 362 - Amendment - AmD - Formula Change\*\*  
363 - Resubmission
- 370 - Amendment - New Use - First Food or Feed Use for Chemical  
371 - Resubmission
- 383 - Amendment - AmD - Inert Label Warning Statement\*\*  
384 - Resubmission
- 385 - Amendment - Special Packaging (Sect. 162.16)  
386 - Resubmission
- 387 - Amendment - AmD - Special Packaging\*\*  
388 - Resubmission
- 390 - Amendment - Inert Substitution  
391 - Resubmission
- 395 - Amendment - Inert Label Warning Statement  
396 - Resubmission
- 397 - Amendment - AmD - Minor Formulaton Change for End Use  
Product\*\*  
398 - Resubmission

D. Miscellaneous (Registration Division use only)

- 400 - Miscellaneous Data (data not requested). Does not include  
Adverse Data submissions (see A Code 405)  
401 - Resubmission
- 405 - Adverse Data [Section 6(a)(2)] submission.  
406 - Resubmission
- 410 - Data Call-in [FIFRA Section 3(c)(2)(B)]  
411 - Resubmission
- 445 - Exemption Request - Child Resistant Packaging (Sect.  
162.16)  
446 - Resubmission
- 455 - Enforcement Case Reviews

Worker Protection Standards Amendments

- 460 - Request for Cancellation  
461 Resubmission
- 462 - Use deletion amendment (out of scope)  
463 Resubmission

PRAT Action Codes

Revised 10/18/93

- 464 - Standard Compliance Label Amendment  
465 Resubmission
- 466 - Non-Standard Compliance Label Amendment  
467 Resubmission
- 468 - Non-Standard Label Amenment plus other action  
469 Resubmission

E. Emergency Exemptions/Conditional Registration/Special Local Needs (Registration Division use only)

- 500 - Section 18 - Specific Exemption - New Chemical - Food or Feed Use.
  - 501 - Resubmission
  - 502 - Final Report
  - 503 - Amendment
- 505 - Section 18 - Specific Exemption New Chemical - Non-Food or Non-Feed Use.
  - 506 - Resubmission
  - 507 - Final Report
  - 508 - Amendment
- 510 - Section 18 - Specific Exemption Old Chemical - Food or Feed Use
  - 511 - Resubmission
  - 512 - Final Report
  - 513 - Amendment
- 515 - Section 18 - Specific Exemption Old Chemical - Non-Food or Non-Feed Use.
  - 516 - Resubmission
  - 517 - Final Report
  - 518 - Amendment
- 520 - Section 18 - Quarantine - New Chemical - Food or Feed Use.
  - 521 - Resubmission
  - 522 - Final Report
  - 523 - Amendment
- 525 - Section 18 - Quarantine - New Chemical - Non-Food or Non-Feed Use.
  - 526 - Resubmission
  - 527 - Final Report
  - 528 - Amendment
- 530 - Section 18 - Quarantine - Old Chemical - Food or Feed Use.
  - 531 - Resubmission
  - 532 - Submission - Final Report
  - 533 - Amendment
- 535 - Section 18 - Quarantine - Old Chemical - Non-Food or Non-Feed Use.
  - 536 - Resubmission
  - 537 - Final Report
  - 538 - Amendment



PRAT Action Codes

Revised 10/18/93

- 550 - Section 18 - Crisis Exemption - Old Chemical - Food or Feed Use.
  - 551 - Resubmission
  - 552 - Final Report
  - 553 - Amendment
- 555 - Section 18 - Crisis Exemption - Old Chemical - Non-Food or Non-Feed Use.
  - 556 - Resubmission
  - 557 - Final Report
  - 558 - Amendment
- 560 - Section 18 - Public Health Exemption - New Chemical
  - 561 - Resubmission
  - 562 - Final Report
  - 563 - Amendment
- 565 - Section 18 - Public Health Exemption - Old Chemical
  - 566 - Resubmission
  - 567 - Final Report
  - 568 - Amendment
- 569 - General Correspondence - Emergency Exemption
- 570 - Conditional Registration Follow-up - Data - Requiring RD Review
  - 571 - Resubmission
- 575 - Conditional Registration Follow-up - Data - Requiring HED/EFED Review
  - 576 - Resubmission
- 580 - Special Local Need - 24(c) Application - Food or Feed Use.
  - 581 - Resubmission
  - 582 - Amendment
  - 583 - Resubmission
- 585 - Special Local Need - 24(c) Application - Non-Food or Non-Feed Use.
  - 586 - Resubmission
  - 587 - Amendment
  - 588 - Resubmission
- F. - Reregistration (Active Ingredient Reregistration) - - - - -
- 606 - Data Package Review (except voluntary cancellation, use 900)
  - 607 - Phase 5 Resubmission
- 610 - Time Extension Request (submitted outside of phase 2 to 5 response)
  - 611 - Resubmission

PRAT Action Codes

Revised 10/18/93

- 614 - Data Waiver Request Submission (including extensions of existing data waiver request and new data waiver request)
- 615 - Waiver Request Resubmit
- 618 - Initiate LUIS Report - For RED Development
- 619 - Initiate RED Product Specific - For RED Development
- 620 - 3(c)2(B) - 90 Day Response (including data requirement and guideline revisions)
- 621 - 3(c)2(B) Resubmission
- 623 - Initiate RED Chapter - For RED Development
- 625 - 6(a)(2) - Reregistration/Special Review
- 626 - 6(a)(2) Resubmission
- 627 - Generic Data Submission (required but submitted outside phase 2 to 5 response)
- 628 - Generic Data Resubmission
- 629 - General Correspondence - Reregistration
- 635 - Proposed Test Protocol Submission
- 636 - Protocol Resubmission
- 645 - Tolerance Revocation/Amendment
- Product Reregistration
- 650 - Data Waiver Request - Reregistration
- 651 - Resubmission
- 655 - Formulation Data and Labeling Submission - Reregistration
- 656 - Resubmission
- 660 - Generic Data Submission - Reregistration
- 661 - Resubmission
- 662 - Issuance of Reregistration Eligibility Document (RED)
- 663 Resubmission
- 665 - Protocol Review - Reregistration (Reg. Div. use)
- 666 - Resubmission
- 667 - Expedited Labeling Response - Reregistration
- 668 - Resubmission
- 670 - 90 day Response to RED - Data Call-In
- 671 - Resubmission

PRAT Action Codes

Revised 10/18/93

- 674 - 8 Month Response to RED - Application for Reregistration -  
Product Specific Data & Labeling
- 675 - Resubmission
- 676 - Time Extension Request
- 677 - Resubmission
- 680 - IR-4 Data (Minor Use) - Reregistration
- 681 - Resubmission
- 690 - General Correspondence (RD only)
- 697 - Congressional Inquiry
- G. Experimental Use Permits - (Registration Division use only)
- 700 - EUP - New Chemical - Non-Food or Non-Feed Use
- 701 - Resubmission
- 704 - Amendment EUP - New Chemical - Non-Food or Non-Feed Use
- 705 - Resubmission
- 706 - Extension/Renewal EUP New Chemical-Non-Food or Non-Feed Use
- 707 - Resubmission
- 709 - Final Report EUP - New Chemical - Non-Food or Non-Feed Use
- 710 - EUP - New Chemical - Food or Feed Use
- 711 - Resubmission
- 714 - Amendment - EUP - New Chemical - Food or Feed Use
- 715 - Resubmission
- 716 - Extension or Renewal - EUP - New Chemical - Food or Feed Use
- 717 - Resubmission
- 719 - Final Report - EUP - New Chemical - Food or Feed Use
- 720 - EUP - New Chemical - Biological - Non-Food or Non-Feed Use
- 721 - Resubmission
- 724 - Amendment - EUP - New Chemical - Biological - Non-Food or  
Non-Feed Use
- 725 - Resubmission
- 726 - Extension or Renewal Request - EUP - New Chemical -  
Biological - Non-Food or Non-Feed Use
- 727 - Resubmission
- 729 - Final Report - EUP - New Chemical - Biological - Non-Food or  
Non-Feed Use



PRAT Action Codes

Revised 10/18/93

- 730 - EUP - New Chemical - Biological - Food or Feed Use  
731 - Resubmission
- 734 - Amendment EUP - New Chemical - Biological - Food or Feed Use  
735 - Resubmission
- 736 - Extension or Renewal Request - EUP - New Chemical -  
Biological - Food or Feed Use  
737 - Resubmission
- 739 - Final Report - EUP - New Chemical/Biological-Food or Feed Use
- 740 - EUP - Old Chemical - Non-Food or Non-Feed Use  
741 - Resubmission
- 744 - Amendment - EUP - Old Chemical - Non-Food or Non-Feed Use  
745 - Resubmission
- 746 - Extension or Renewal Request - EUP - Old Chemical - Non-Food  
or Non-Feed Use  
747 - Resubmission
- 749 - Final Report - EUP - Old Chemical - Non-Food or Non-Feed Use
- 750 - EUP - Old Chemical - Food or Feed Use  
751 - Resubmission
- 754 - Amendment - EUP - Old Chemical - Food or Feed Use  
755 - Resubmission
- 756 - Extension or Renewal Request - EUP - Old Chemical - Food or  
Feed Use  
757 - Resubmission
- 759 - Final Report - EUP - Old Chemical - Food or Feed Use
- 785 - Protocol Review Request - EUP  
786 - Resubmission
- 790 - Novel Microbial Pesticides (Notification)  
791 - Resubmission

= = = = =  
H. Special Review (Special Review and Reregistration Division  
use only)

- 810 - Time Extension - Special Review
- 811 - Risk Assessment - Special Review
- 812 - Benefit Assessment - Special Review

PRAT Action Codes

Revised 10/18/93

- 813 - Exposure Assessment - Special Review
- 814 - Data Waiver Request - Special Review
- 815 - Resubmission
- 820 - Special Review DCI Submission
- 821 - Resubmission
- 825 - 6(A)(2) - Potential Adverse Effects - Special Review
- 826 - Resubmission
- 835 - Proposed Test Protocol - Special Review
- 836 - Resubmission
- 845 - Review of Public Comments - Special Review
- 846 - Supplemental Submission
- 860 - SRB Other
- 880 - Tolerance Revocation

= = = = =

I. Cancellation/Suspension

- 900 - Cancellation - Voluntary (Company request).
- 901 - Resubmission
- 905 - Cancellation - Section 6(e).
- 906 - Resubmission
- 910 - Cancellation - Special Review
- 911 - Resubmission
- 915 - Cancellation - Undeliverable
- 916 - Resubmission
- 925 - Suspension
- 926 - Resubmission
- 927 - Suspension (Reregistration)
- 928 - Resubmission
- 929 - Suspension (Special Review)
- 930 - Resubmission
- 931 - Suspension (Inert Ingredient)
- 932 - Resubmission
- 935 - Cancellation - Inert Ingredient
- 936 - Resubmission

PRAT Action Codes

Revised 10/18/93


- 945 - Cancellation - Other  
(i.e. phase 2 & 3 noncompliance; reregistration  
fee; maintenance fee)
- 946 - Resubmission



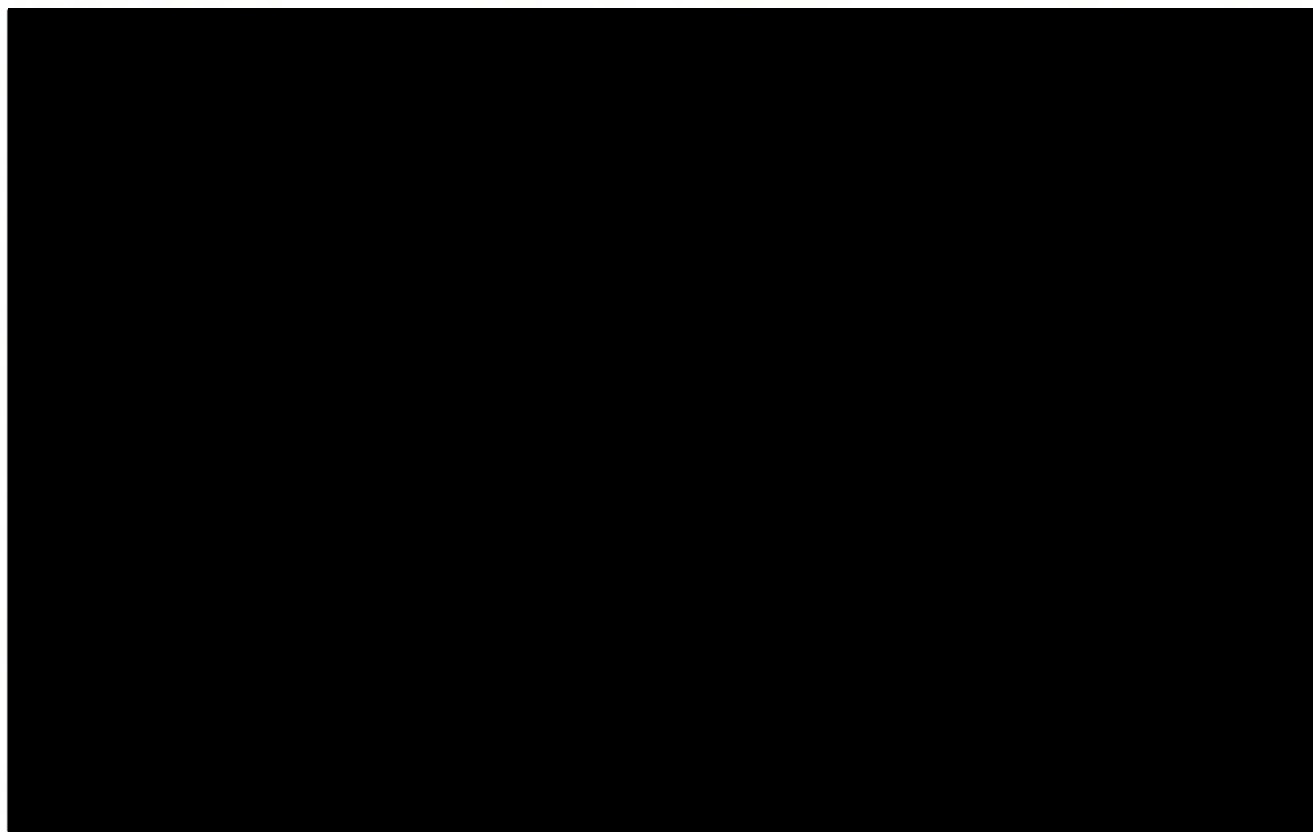
 **Suzanne Krolikowski**

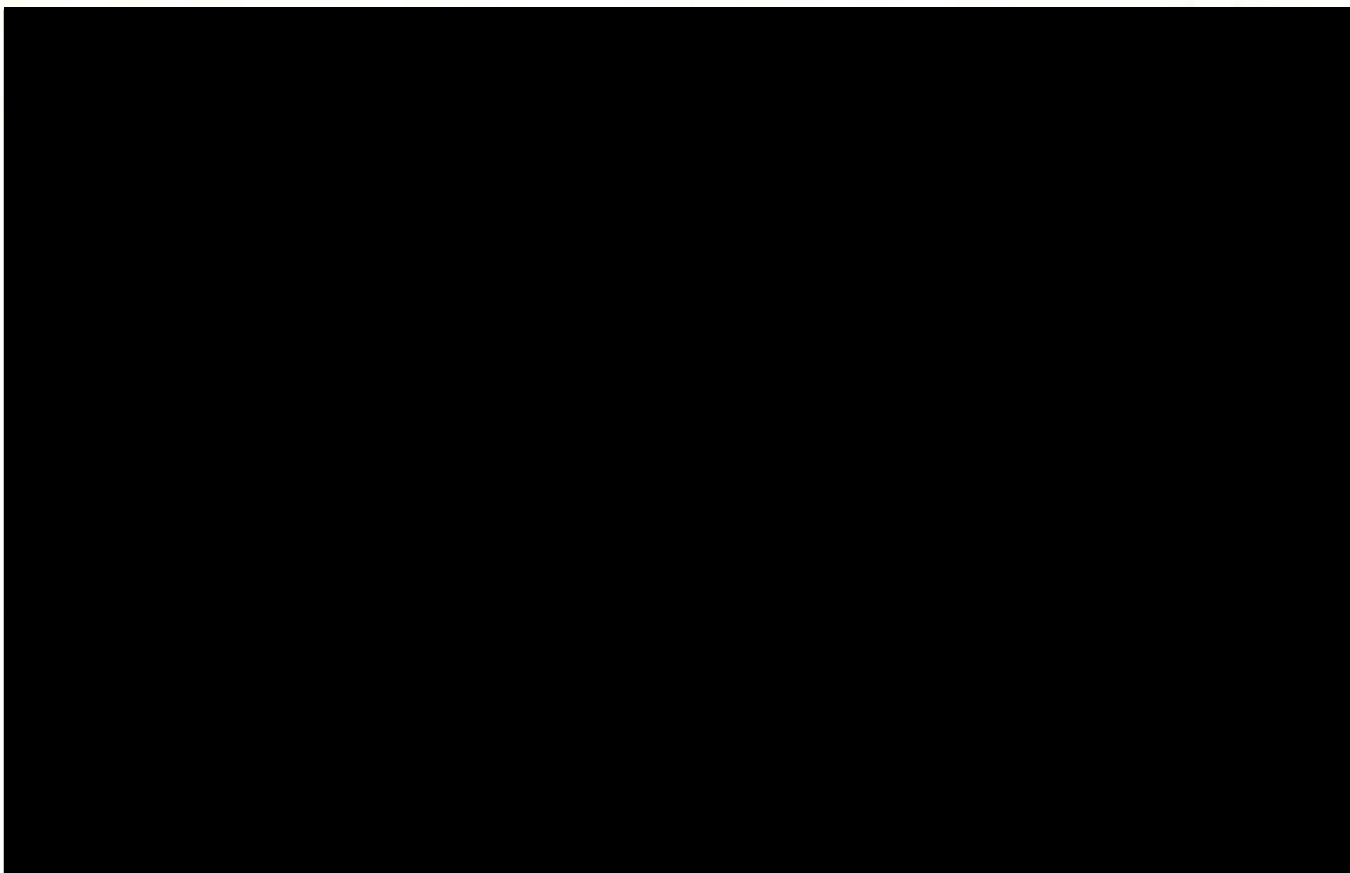
04/19/01 07:46 PM

To: Sheryl Reilly/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Janet  
Andersen/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA

Subject: Re: REVISED VERSION: Question about tolerance exemption 

*Attorney-Client Advice  
Do Not Disclose*





Suzanne Krolikowski  
(202) 564-5632  
EPA's Office of General Counsel

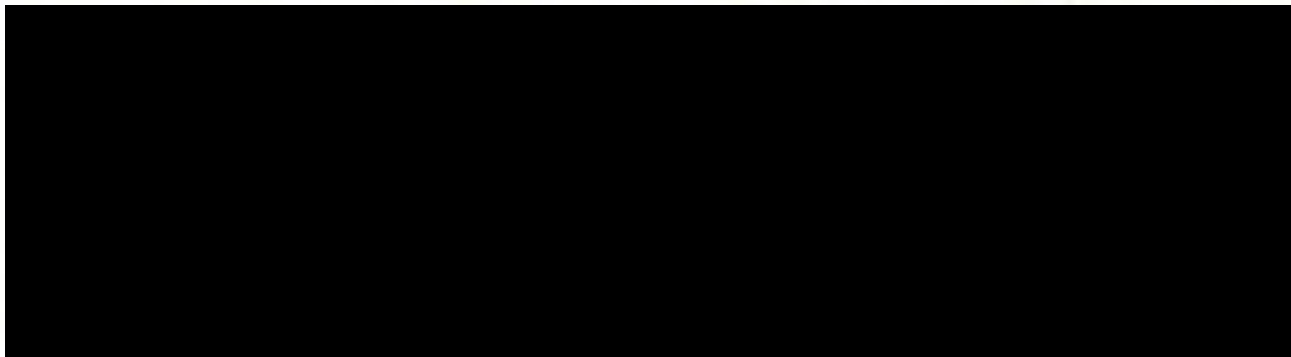
Sheryl Reilly

**Sheryl Reilly**

04/19/2001 09:40 AM

To: Suzanne Krolikowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Janet  
Andersen/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA

Subject: Re: REVISED VERSION: Question about tolerance exemption





Suzanne Krolikowski  
04/18/01 09:49 AM

To: Janet Andersen/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA  
Subject: Re: Question about tolerance exemption

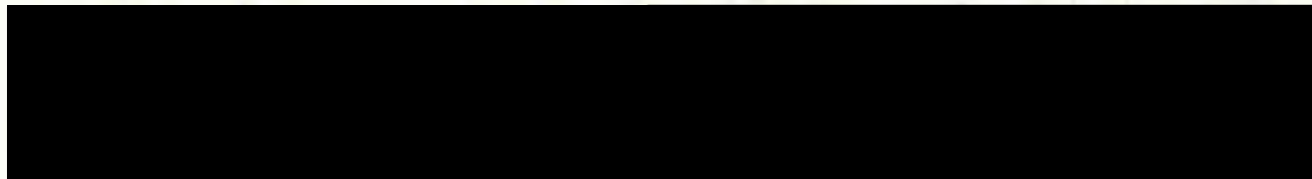
*Attorney-Client Advice  
Do Not Disclose*



Janet Andersen

Janet Andersen  
04/18/2001 07:08 AM

To: Suzanne Krolikowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA  
Subject: Re: Question about tolerance exemption



Suzanne Krolikowski

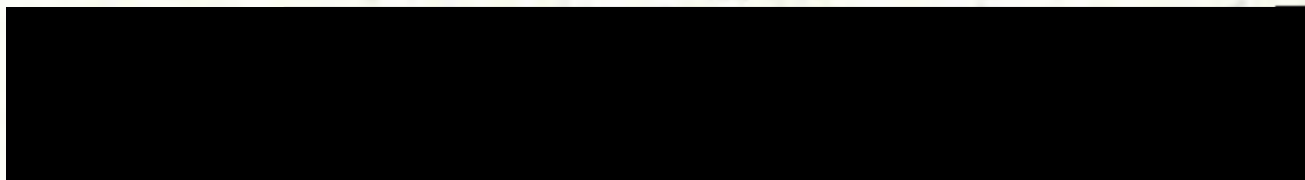


Suzanne Krolikowski  
04/17/01 06:48 PM

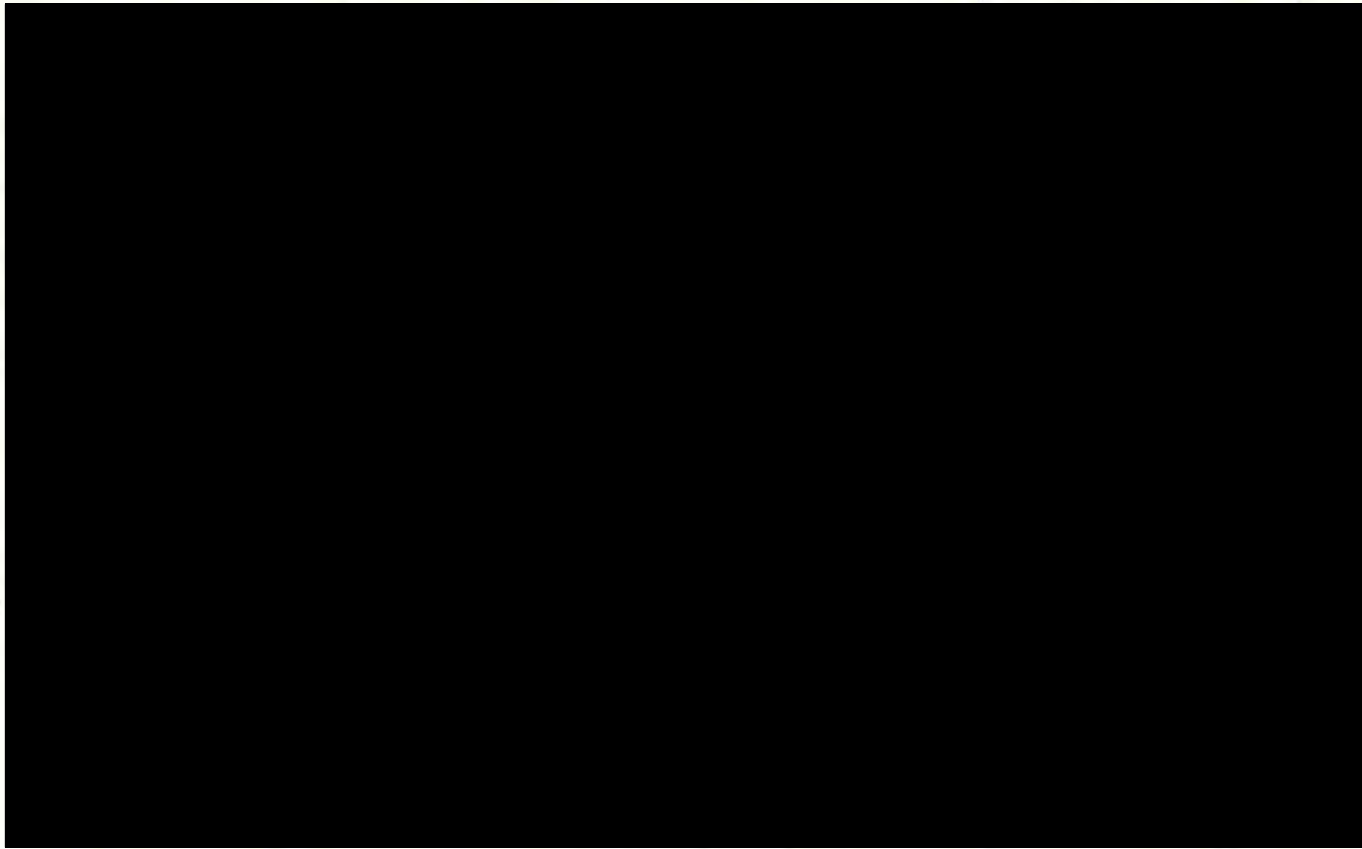
To: Janet Andersen/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA  
Subject: Re: Question about tolerance exemption

*Attorney-Client Advice  
Do Not Disclose*

Janet and Sheryl,



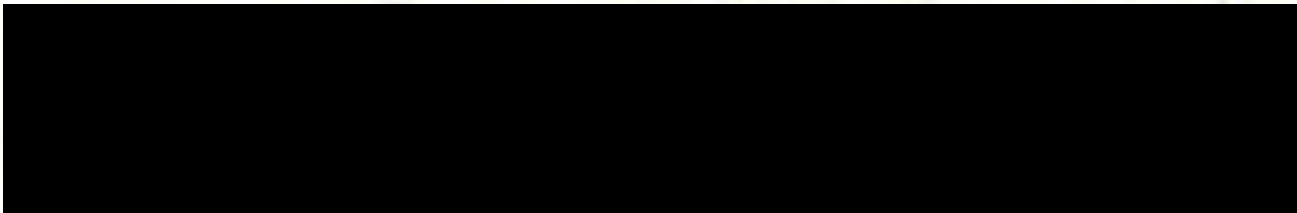




Janet Andersen

Janet Andersen  
04/17/2001 04:58 PM

To: Sheryl Reilly/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, Suzanne  
Krolikowski/DC/USEPA/US@EPA  
Subject: Re: Question about tolerance exemption



Sheryl Reilly

Sheryl Reilly  
04/17/01 02:30 PM

To: Suzanne Krolikowski/DC/USEPA/US@EPA  
cc: Driss Benmhend/DC/USEPA/US@EPA, Mike  
Mendelsohn/DC/USEPA/US@EPA, Roger  
Gardner/DC/USEPA/US@EPA, Russell  
Jones/DC/USEPA/US@EPA, (bcc: Janet Andersen/DC/USEPA/US)  
Subject: Question about tolerance exemption

Hi, Suzanne,





Stephen L. Longacre@RohmHaas.Com (Stephen L Longacre) on 03/16/2001  
09:33:42 AM

To: Driss Benmhend/DC/USEPA/US@EPA, Sheryl Reilly/DC/USEPA/US@EPA  
cc:  
Subject: Preliminary 14C-1-MCP Apple Residue Results

Driss and Sheryl,

In my response to the Agency's Science Review of our petition for an exemption from the requirement of 1-MCP residues on food commodities (OF 06144), I indicated that we have completed our difficult methods development for measuring very low levels of a volatile active ingredient and have initiated our definitive residue studies with 14C-1-MCP in apples. Our initial definitive trial has been completed, and preliminary residue results from this trial are attached (~~'residue1.doc'~~). ~~These data are for your use in your ongoing discussions regarding my recent requests for a timely granting of an exemption from tolerance for 1-MCP on food commodities, and for conditional registration for indoor use of EthylBloc Technology (0.14% 1-MCP) on harvested fruits and vegetables.~~

2-4 ppb.  
Negligible concentrations of residues were detected (2-4 parts per billion)

in the apples treated with 1.2 ppm (1200 ppb) 1-MCP for 24 hr. The small amount of detected radioactivity was reasonably distributed among all apples in the treatment chamber. These preliminary results support our petition indicating that any potential residues would be negligible and below the theoretical maximum amount of 9 ppb which assumes that ALL of the

1-MCP in the treatment room ended up in/on the apples. These residue concentrations are below reasonable non-radiolabeled analytical detection limits.

The margins of safety for dietary exposure assuming the worst case that ALL consumed food contains 9 ppb (0.009 ppm) 1-MCP residues are huge (thousands-fold margin of safety). Dietary risks assessments are indicated in my response to Valent Biosciences' comments that I submitted to the Agency 19Dec00 (SLL-00-303), and will be contained in a document that I will submit to the Agency later this month.

Again, I am available at any time to discuss our request for a timely granting of an exemption from tolerance for 1-MCP on food commodities and a conditional registration for EthylBloc technology indoor post-harvest food use.

Regards,

Steve Longacre  
AgroFresh, Inc./Rohm and Haas Company  
T: 215-592-3581



## BPPD PRAT ACTION CODING FORM

PM 90: Janet Andersen  
*ROHM and HAAS*REVIEWER: *Doro Bunker*  
(ASSIGNED BY: *Mike Mader*)EPA REG./FILE SYMBOL 71297-1*Amendment*ACTION CODE 305(NEW a.i./EUPs/Tolerances: Yes      No     )SUBMISSION BARCODE 5596574DATE ON APPLICATION 4/4/01EPA RECEIVED DATE 4/6/01PM RECEIVED DATE 4/19/01ASSIGNED IN PRAT: YES X NO     COMPLETED BY: T. Bethea DATE: 5/1/01*Cyclopropene, 1-methyl - (701, 801, 901) (CA Index)*

## FINAL ACTION

Response Code     Response Date:     MOS:      (1) Cite-All     (4) Not Applicable     (8) SelectiveCRP: Yes      No     Restricted Use: Yes      No     Manufacturing Use: Yes      No     Exclusive Use: Yes      No

FRONT END PROCESSING APPLICATION INFORMATION CHECK LIST

---

PM 91

EPA COMPANT NUMBER 71297-1

EPA REGISTRATION NUMBER STATUS    ACTIVE ✓ CANCELLED \_\_\_\_\_  
(FOR AMENDMENTS)

NOT IN REFS \_\_\_\_\_

"ME-TOO" CITED PRODUCT STATUS    ACTIVE \_\_\_\_\_ CANCELLED \_\_\_\_\_

NOT IN REFS \_\_\_\_\_

OPP# 284868    DATE 4-18-01

---



AMENDMENT

APPLICATION FOR AMENDMENT

WITH DATA

WITHOUT DATA

| <u>INIT.</u>     | <u>DATE</u>         | <u>INIT.</u>   | <u>DATA</u>    |
|------------------|---------------------|----------------|----------------|
| FEU_____         | _____               | FEU <u>juw</u> | <u>4-18-01</u> |
| SIG. (DATA)_____ | _____               | PM <u>91</u>   |                |
| PM_____          |                     |                |                |
|                  | OPP # <u>284868</u> |                |                |





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

04/18/2001

AMY PLATO ROBERTS  
TECHNOLOGY SCIENCES GROUP, INC.  
1101 17TH STREET, NW, SUITE 500  
WASHINGTON DC 20036

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

PRODUCT NAME: ETHYLBLOC  
COMPANY NAME: TECHNOLOGY SCIENCES GROUP, INC  
OPP IDENTIFICATION NUMBER: 284868  
EPA REGISTRATION NUMBER: 71297-1  
EPA RECEIPT DATE: 04/06/2001

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application qualifies for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability.

If you have any questions, please contact Sheryl Reilly, Product Manager 91, at (703) 308-8269.

Sincerely,

*J. Krize*

Front End Processing Staff  
Information Services Branch  
Program Management and Support Division



United States  
Environmental Protection Agency  
Washington, DC 20460

X

Registration  
Amendment  
Other

OPP Identifier Number  
**284868**  
**250081**

**Application for Pesticide - Section I**

|                                                                                                                                                                                                                       |                                                                                                                                                                                             |                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br>71297-1- <del>32258</del>                                                                                                                                                                | 2. EPA Product Manager<br>Driss Benmhend                                                                                                                                                    | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br>EthylBloc®                                                                                                                                                                               | PM#<br>91                                                                                                                                                                                   |                                                                                                            |
| 5. Name and Address of Applicant (Include Zip Code)<br>AgroFresh, Inc./ Rohm and Haas Company<br>100 Independence Mall West<br>Philadelphia, PA 19106-2399<br><input type="checkbox"/> Check if this is a new address | 6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                            |

**Section - II**

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

**Explanation:** Use additional page(s) if necessary. (For Section I and Section II.):

Label amendment to add spray solution application of EthylBloc onto potted plants, bedding, nursery and foliage plants in enclosed areas, such as greenhouses.

**Section - III**

|                                                                                                                                                                     |                                                                               |                                                                                        |                                                                                                                                                                                          |                             |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--|
| 1. <b>Material This Product Will Be Packaged In:</b>                                                                                                                |                                                                               |                                                                                        |                                                                                                                                                                                          | 2. <b>Type of Container</b> |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | <input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |                             |  |
| * <b>Certification must be submitted</b><br>If "Yes"      No. per      If "Yes"      No. per<br>Unit Packaging wgt.      container      Package wgt      container  |                                                                               |                                                                                        |                                                                                                                                                                                          |                             |  |
| Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                           |                                                                               | 4. Size(s) Retail Container                                                            | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product                                                        |                             |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               | <input type="checkbox"/> Other _____                                                   |                                                                                                                                                                                          |                             |  |

**Section - IV**

|                                                                                                                                                                                                                                                                                    |  |                                          |  |                                                     |                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------|--|-----------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <b>Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)</b>                                                                                                                               |  |                                          |  |                                                     |                                                                                        |
| Name<br>Stephen L. Longacre, Ph.D.                                                                                                                                                                                                                                                 |  | Title<br>Product Registration Manager    |  | Telephone No. (Include Area Code)<br>215 - 592-3581 |                                                                                        |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |  |                                          |  |                                                     | 6. Date Application Received<br>.....<br>(Stamped)<br>.....<br>.....<br>.....<br>..... |
| 2. Signature<br>                                                                                                                                                                                                                                                                   |  | 3. Title<br>Product Registration Manager |  |                                                     |                                                                                        |
| 4. Typed Name<br>Stephen L. Longacre, Ph.D.                                                                                                                                                                                                                                        |  | 5. Date<br>April 4, 2001                 |  |                                                     |                                                                                        |





United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

284868

## Application for Pesticide - Section I

|                                                                                                                    |                                                                                                                                                                                      |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Company/Product Number                                                                                          | 2. EPA Product Manager                                                                                                                                                               | 3. Proposed Classification<br><input type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)                                                                                          | PM#                                                                                                                                                                                  |                                                                                                 |
| 5. Name and Address of Applicant (Include ZIP Code)<br><br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                 |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

## Section - III

|                                                                                                                                                                     |                                                                               |                                                                                        |                   |                                                                                                                                   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |                   | 2. Type of Container                                                                                                              |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No |                   | <input type="checkbox"/> Metal                                                                                                    |  |
| * Certification must be submitted                                                                                                                                   |                                                                               | If "Yes" Unit Packaging wgt.                                                           | No. per container | <input type="checkbox"/> Plastic                                                                                                  |  |
|                                                                                                                                                                     |                                                                               | If "Yes" Package wgt.                                                                  | No. per container | <input type="checkbox"/> Glass                                                                                                    |  |
|                                                                                                                                                                     |                                                                               |                                                                                        |                   | <input type="checkbox"/> Paper                                                                                                    |  |
|                                                                                                                                                                     |                                                                               |                                                                                        |                   | <input type="checkbox"/> Other (Specify) _____                                                                                    |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            |                   | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               |                                                                                        |                   | <input type="checkbox"/> Other _____                                                                                              |  |

## Section - IV

|                                                                                                                                                                                                                                                                             |          |                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                               |          |                                        |
| Name                                                                                                                                                                                                                                                                        | Title    | Telephone No. (Include Area Code)      |
| Certification<br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |          | 6. Date Application Received (Stamped) |
| 2. Signature                                                                                                                                                                                                                                                                | 3. Title |                                        |
| 4. Typed Name                                                                                                                                                                                                                                                               | 5. Date  |                                        |



## PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

**PAPERWORK REDUCTION ACT NOTICE:** Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

**INSTRUCTIONS:** This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

**Submission of Labeling** - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

**Submission of Data** - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

**SPECIFIC INSTRUCTIONS:** Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.  
**Block A** - Check the appropriate action for which you are submitting this form.

**SECTION I** - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registration that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

**SECTION II** - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

**SECTION III** (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types.  
Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.





United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

284868

## Application for Pesticide - Section I

|                                                                                                                    |                                                                                                                                                                                      |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Company/Product Number                                                                                          | 2. EPA Product Manager                                                                                                                                                               | 3. Proposed Classification<br><input type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)                                                                                          | PM#                                                                                                                                                                                  |                                                                                                 |
| 5. Name and Address of Applicant (Include ZIP Code)<br><br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                 |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

## Section - III

|                                                                                                              |                                                                               |                                                                                                                   |                      |                                                                                                                                   |  |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                |                                                                               |                                                                                                                   |                      | 2. Type of Container                                                                                                              |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                    | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No                            |                      | <input type="checkbox"/> Metal                                                                                                    |  |
| * Certification must be submitted                                                                            |                                                                               |                                                                                                                   |                      | <input type="checkbox"/> Plastic                                                                                                  |  |
|                                                                                                              | If "Yes" Unit Packaging wgt.                                                  | No. per container                                                                                                 | If "Yes" Package wgt | <input type="checkbox"/> Glass                                                                                                    |  |
|                                                                                                              |                                                                               |                                                                                                                   | No. per container    | <input type="checkbox"/> Paper                                                                                                    |  |
|                                                                                                              |                                                                               |                                                                                                                   |                      | <input type="checkbox"/> Other (Specify) _____                                                                                    |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container |                                                                               | 4. Size(s) Retail Container                                                                                       |                      | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product |  |
| 6. Manner in Which Label is Affixed to Product                                                               |                                                                               | <input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                      | <input type="checkbox"/> Other _____                                                                                              |  |

## Section - IV

|                                                                                                                                                                                                                                                                                    |          |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                                      |          |                                           |
| Name                                                                                                                                                                                                                                                                               | Title    | Telephone No. (Include Area Code)         |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |          | 6. Date Application Received<br>(Stamped) |
| 2. Signature                                                                                                                                                                                                                                                                       | 3. Title |                                           |
| 4. Typed Name                                                                                                                                                                                                                                                                      | 5. Date  |                                           |



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6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registration that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

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**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.





April 4, 2001

Document Processing Desk (AMEND)  
Office of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biopesticides & Pollution Prevention Division  
Room 266A, Crystal Mall #2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

SLL-01-085

Dear Mr. Benmhend:

**Subject: EthylBloc® (EPA Reg. No. 71297-1-~~32258~~)**  
**Active Ingredient = 1-Methylcyclopropene (1-MCP)**  
**Label Amendment to Add Spray Solution Application**

AgroFresh, Inc., a fully-owned subsidiary of Rohm and Haas Company, requests a label amendment to the currently approved EthylBloc flower/non-food use label to add spray solution application of EthylBloc/1-MCP in enclosed areas, such as greenhouses. Floralife, Inc., our sub-registrant, has conducted studies to demonstrate the usefulness of the spray solution application technique. A small amount of EthylBloc would be added to water (1.5 grams EthylBloc powder per gallon of water) and immediately sprayed onto potted plants, bedding, or nursery and foliage plants. The amount of EthylBloc powder and 1-MCP active ingredient applied via spraying is much less than the corresponding amount of EthylBloc powder and 1-MCP active ingredient that would be applied as a gas treatment for a given amount of plants within a given volume.

Please contact me by phone (215-592-3581), fax (215-592-3414), or email (rstysl@rohmmaas.com) if you have any questions about this label amendment request.

Sincerely,

Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

cc: Jim Daly (Floralife, Inc.)  
Jay Holmdal (Rohm and Haas)

D. Benmhend  
04Apr01  
Page 2

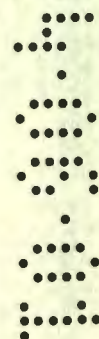
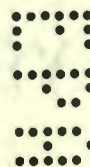
Administrative materials submitted with this letter (5 copies of label):

EPA Form 8570-1 (OPP Identifier No. 250082);

Draft label for EthylBloc (EPA Reg No. 71297-1-32258; SLL/03Apr01)



RECYCLING IS  
GOOD CHEMISTS





L0000620



February 21, 2001

Document Processing Desk - 6(a)2  
Office of Pesticide Programs (H7504C)  
U.S. Environmental Protection Agency  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

SLL-01-063

Dear Sir or Madam:

**Subject: Submission of Information under FIFRA Section 6(a)2**

Rohm and Haas Company's fully-owned subsidiary, AgroFresh, Inc. (formerly Biotechnologies for Horticulture, Inc.) is hereby submitting under FIFRA Section 6(a)2 results of a female rat two-week inhalation toxicity study conducted with CAS No. 3100-04-7, the active ingredient in product EPA Registration No. 71297-1.

In the study, CAS No. 3100-04-7 was administered via inhalation (whole body 6-hour exposure) at 0 ppm, 100 ppm (0.22 mg/L), 300 ppm (0.66 mg/L), or 1000 ppm (2.2 mg/L) to groups of 7 female Crl:CD<sup>1</sup> BR rats for 9 days over a two-week period. The animals were killed and evaluated for body weight and feed consumption, clinical signs, hematology and clinical chemistry, organ weights, and histopathology.

No effects were observed at 100 ppm (equivalent to 63 mg/kg/day). At 300 ppm, increased extramedullary hematopoiesis (minimal to mild in severity) was observed in the spleen of 4 of 7 animals. At 1000 ppm, minimal decreases (<10% change) in total red blood cells, hemoglobin, and hematocrit were observed along with increased spleen weight and increased extramedullary hematopoiesis (mild to moderate in severity) in the spleen. No treatment-related clinical signs or body weight changes were observed at any dose.

The results of increased extramedullary hematopoiesis of the spleen, increased spleen weight, and the decreased hematologic parameters have not been observed previously for CAS No. 3100-04-7, and we are submitting this information to the Agency on this basis.

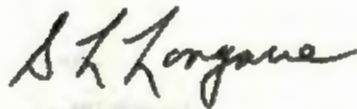
A final report on this study will be submitted to the Agency later this year when it has been completed.



EPA/6(a)2  
21Feb01  
Page 2

Please contact me by telephone (215-592-3581), fax (215-592-3414) or  
e-mail (rstysl@rohmmaas.com) if you have any questions about this letter.

Sincerely,



Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

cc: Mr. Driss Benmhend/EPA BPPD

DRAFT



February 2, 2001

Mr. Driss Benmhend  
Biopesticides & Pollution Prevention Division  
Office of Pesticide Programs (7511C)  
U.S. Environmental Protection Agency  
Room 902, Crystal Mall #2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

SLL-01-033

Dear Mr. Benmhend:

**Subjects: Major Points and Follow-Up Actions from Our 23Jan01 Meeting on  
1-Methylcyclopropene (1-MCP) Exemption from Tolerance  
Petition, and 1-MCP 0.14% and 3.3% Formulation EUP and Section 3  
Food-Use Petitions**

I would like to again thank you and your colleagues for meeting with us to discuss a number of items pertaining to our 1-MCP food-use registration petitions. My understanding of the major points we discussed and agreed-upon follow-up actions are indicated below:

**Participants:**

EPA BPPD:

Driss Benmhend  
Sheryl Reilly  
Russell Jones  
Freshteh Toghrol

Rohm and Haas Company:

Stephen Longacre  
George Hazelton

**Clarification of EthylBloc Technology Ownership:**

Rohm and Haas Company has changed the name of its subsidiary holding the registrations for EthylBloc Technology (EPA Reg. No. 71297-1 and 71297-EUP-1) to AgroFresh, Inc. (formerly BioTechnologies for Horticulture, Inc). Documentation for this name change, along with label amendments for our EthylBloc Section 3 food use petition (filed 06Apr00) and for our EthylBloc apple Experimental Use Permit (approved 12Oct00), were submitted to the Agency 20Nov00.



Mr. Benmhend  
02Feb01  
Page 2

**1-MCP Exemption from Tolerance Petition and EthylBloc Technology Section 3 Food-Use Registration:**

Our 1-MCP exemption from tolerance petition (Rohm and Haas Report 00R-1012) and our Section 3 petition for the food-use registration of EthylBloc Technology (0.14% 1-MCP) were submitted to the Agency 06Apr00. You indicated that the reviews of the exemption from tolerance petition and food-use registration were scheduled for completion by end Feb '01. The drafting, review, and publication of the Final Rule for the exemption from tolerance in the Federal Register will take 1-2 months after the reviews are completed. The notification of the Section 3 registration would be mailed very soon after publication of the Final Rule. It is too early to tell if any additional data will be required prior to acceptance of these petitions, but there is nothing immediately pressing.

Valent BioSciences submitted comments to our notice of filing published 21Jun00. We submitted responses to Valent BioSciences' comments to the Agency 19Dec00. Please feel free to use our comments in your responses to Valent BioSciences' comments. Dietary and worker risk assessments for 1-MCP are included in our response.

Action: D. Benmhend to insure the reviewer, R. Jones, has a copy of our responses to Valent BioSciences' comments for his use.

Rohm and Haas has recently prepared a document on the air dispersion modeling of 1-MCP from a controlled atmosphere facility, that conservatively estimates very low (< 1 ppb) concentrations of 1-MCP in the atmosphere upon venting from the treatment room.

Action: S. Longacre will submit this air dispersion document (Rohm and Haas Report 00R-1066) to EPA (done).

**EthylBloc Technology EUP:**

The EUP on our 0.14% formulation that was approved and initiated last October is in progress. The company where the trial is being conducted (Stemilt) wants the room emptied in April after only 6 months, rather than 9 months. This will be very close to the time the tolerance exemption is likely to be published. I will submit a petition to amend this EUP to a crop non-destruct EUP after the exemption from tolerance has been published as per your advice.



### AgroFresh™ Technology:

We have developed a process to manufacture a 3.3% 1-MCP in [REDACTED] formulation. The brand name for this 3.3% product will be AgroFresh™ Technology. This formulation will be much more convenient to use for food-use treatment compared to the 0.14% formulation. ***The maximum amount of ai released into a treatment room will remain at 1 ppm v/v regardless which formulation (3.3% or 0.14%) is used.*** The difference is that it will take only about 1/25th as much of the 3.3% product to accomplish this compared to the 0.14% product.

### 3.3% Product EUP:

I showed several pictures to give the flavor of how big commercial apple storage facilities really are. A 2500 m<sup>3</sup> storage room (about 30 feet wide, 70 feet long, 35 feet high) will contain about 2000 bins of apples (each bin = 900 lb apples); thus each room contains about 1,800,000 lb of apples. You indicated that an EUP for 180 room-treatments, which would utilize 3% of total US harvested apples, would not be approved. We probably would not get approval for an EUP much different from our current 6 trial EUP for the 0.14% formulation. We would need to clarify expected learnings from a new EUP. Your advice is to wait until the review of our exemption from tolerance petition is completed at the end of February to see if anything else would be required before submitting an EUP for the 3.3% product. The EUP for the 3.3% product would need to be crop destruct in the absence of the tolerance exemption approval. It might be best simply to submit the 3.3% Section 3 petition as soon as possible, but it is unlikely that this petition would be reviewed and approved by end of July/early Aug '01 in time for the apple post-harvest treatment season.

We briefly discussed a proprietary 1-MCP releasing system in which a custom designed generator already containing the powdered 1-MCP formulation was shipped to the customer. The customer would add water, turn on the CO<sub>2</sub> tank, push the plunger to mix the powder with the water, and the worker would immediately leave and seal the room. This will likely result in negligible worker exposure. Our response to Valent BioSciences' comments contains a worker risk assessment, and shows acceptable margins of safety even in worse-case situations.

### Alternate 0.14% Formulations:

We are considering two alternate formulations. The first would be 0.14% 1-MCP, [REDACTED] This formulation would facilitate the release of 1-MCP out of the aqueous solution and into the atmosphere via effervescent action. You indicated that a Confidential Statement of Formula plus a description of how the formulation is prepared submitted as an alternate



Mr. Benmhend  
02Feb01  
Page 4

formulation is probably all that is needed for approval of this formulation. The second formulation would be 0.14% 1-MCP plus [REDACTED]. You indicated that a CSF submitted as an alternate formulation is likely all that would be needed, since this alternate formulation is simply a different ratio of the inert ingredients from an already approved formulation.

#### **Additional Toxicology and Residue Studies:**

We discussed the ongoing studies we are conducting in support of our 3.3% formulation petition. These studies include the following:

- Product chemistry;
- 5 acute tox studies conducted with 3.3% formulation;
- rat 4 hr acute inhalation and mouse *in vivo* micronucleus assay conducted with 1000 ppm v/v 1-MCP gas; and
- 3 mutagenicity studies in which the agar plates or aqueous cell systems are exposed to an atmosphere of 1000 ppm v/v 1-MCP gas.

These studies will be submitted in Mar '01 as part of our Section 3 and EUP submissions for the 3.3% formulation.

We also discussed additional studies we are conducting or plan to conduct in support of our non-US 1-MCP registrations:

- Rat inhalation developmental toxicity (no developmental toxicity observed up to and including exposure to 1000 ppm v/v 1-MCP, report in preparation);
- Rat two-week range-finding inhalation study (minimal blood and spleen effects observed, report in preparation);
- Rat 90-day inhalation study (to initiate Feb '01, final report target 31Aug01);
- <sup>14</sup>C-1-MCP small chamber apple residue study (methods development in progress);
- <sup>14</sup>C-1-MCP rat toxicokinetic study (to initiate Mar/Apr '01, final report target 31Aug01).

You indicated that it is not likely that the reviews of the exemption from tolerance petition or the 0.14% Sec 3 registration petition will be held up pending submission and review of any or all of the developmental tox, two-week- or 90-day, or residue studies, since final reports will not be available until later in the year. We will submit all 1-MCP tox and residue final reports to you upon completion.

Mr. Benmhend  
02Feb01  
Page 5

**Miscellaneous Items:**

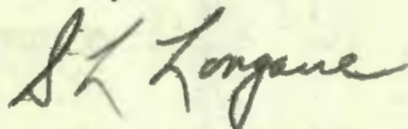
Action: D. Benmhend to insure MRID numbers are/were assigned for our 1-MCP exemption from tolerance petition (Rohm and Haas Report 00R-1012) and our study waiver document (Rohm and Haas Report AGREG-00-02) in support of the 0.14% EthylBloc food use petition;

Action: D. Benmhend to facilitate review of our 26Sep00 submitted alternate formulation (0.14% 1-MCP, [REDACTED]);

Action: D. Benmhend to review our 24Aug00 submitted placard for truck flower use instructions.

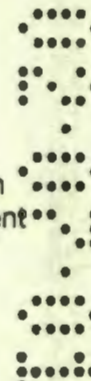
Please let me know if I have overlooked something or have not accurately captured any key points or action items. I can be reached by phone (215-592-3581), fax (215-592-3414), or Email (rstysl@rohmmaas.com) if you have any questions.

Sincerely,



Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

cc: Sheryl Reilly (EPA/BPPD)  
Russell Jones (EPA/BPPD)  
Freshteh Toghrol (EPA/BPPD)  
George Hazelton (Rohm and Haas)





# BPPD PRAT ACTION CODING FORM

**Agro Fresh Inc.**  
PM 90: Janet Andersen

REVIEWER: Driss  
(ASSIGNED BY: LH)

EPA REG./FILE SYMBOL 71297-1

*Alternate formulation  
Amendment*

ACTION CODE 345

(NEW a.i./EUPs/Tolerances: Yes      / No     )

SUBMISSION BARCODE S593311

DATE ON APPLICATION 2/1/01

EPA RECEIVED DATE 2/2/01

PM RECEIVED DATE 2/12/01

ASSIGNED IN PRAT: YES ✓ NO     

COMPLETED BY: LH DATE: 3/1/01

## FINAL ACTION

Response Code ---

Response Date:           

MOS:            (1) Cite-All

           (4) Not Applicable

           (8) Selective

CRP: Yes      No     

Restricted Use: Yes      No     

Manufacturing Use: Yes      No     

Exclusive Use: Yes      No

FRONT END PROCESSING APPLICATION INFORMATION CHECK LIST

---

PM 92

EPA COMPANT NUMBER 71297-1

EPA REGISTRATION NUMBER STATUS ACTIVE ☒ CANCELLED ☐  
(FOR AMENDMENTS)

NOT IN REFS ☐

"ME-TOO" CITED PRODUCT STATUS ACTIVE ☐ CANCELLED ☐

NOT IN REFS ☐

OPP# 275-862 DATE 2-9-01

---

AMENDMENT

APPLICATION FOR AMENDMENT

WITH DATA

WITHOUT DATA

| <u>INIT.</u>        | <u>DATE</u> | <u>INIT.</u>   | <u>DATA</u>  |
|---------------------|-------------|----------------|--------------|
| FEU_____            | _____       | FEU <u>yur</u> | <u>2-9-0</u> |
| SIG. (DATA)_____    | _____       | PM <u>92</u>   |              |
| PM_____             |             |                |              |
| OPP # <u>275862</u> |             |                |              |





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

02/07/2001

STEPHEN L. LONACRE  
TECHNOLOGY SCIENCES GROUP, INC.  
100 INDEPENDENCE MALL WEST,  
PHILADELPHIA PA 19106

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

PRODUCT NAME: ETHYLBLOC TECHNOLOGY  
COMPANY NAME: AGROFRESH, INC.  
OPP IDENTIFICATION NUMBER: 275862  
EPA REGISTRATION NUMBER: 71297-1  
EPA RECEIPT DATE: 02/02/2001

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application qualifies for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability.

If you have any questions, please contact Phil Hutton, Product Manager 92, at (703) 308-8260.

Sincerely,

*J. Wrice*

Front End Processing Staff  
Information Services Branch  
Program Management and Support Division



United States  
Environmental Protection Agency  
Washington, DC 20460

X

Registration  
Amendment  
Other

OPP Identifier Number

275862  
267602

## Application for Pesticide - Section I

|                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                       |                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br>71297-1                                                                                                                                                                                                                                                       | 2. EPA Product Manager<br>Driss Benmhend                                                                                                                                              | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br>EthylBloc® Technology                                                                                                                                                                                                                                         | PM#<br>92                                                                                                                                                                             |                                                                                                            |
| 5. Name and Address of Applicant (Include Zip Code)<br>AgroFresh, Inc. (formerly BioTechnologies for Horticulture, Inc.);<br>a subsidiary of Rohm and Haas Company<br>100 Independence Mall West<br>Philadelphia, PA 19106-2399<br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name: _____ |                                                                                                            |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Amendment - Explain below.                 | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Alternate formulation for EthylBloc (active ingredient = 1-methylcyclopropene) containing approximately [redacted] with 0.14% 1-methylcyclopropene.

## Section - III

|                                                                                                                                                                     |                                                                               |                                                                                        |  |                                                                                                                                   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |  | 2. Type of Container                                                                                                              |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No |  | <input type="checkbox"/> Metal                                                                                                    |  |
|                                                                                                                                                                     | If "Yes" No. per Unit Packaging wgt. container                                | If "Yes" No. per Package wgt. container                                                |  | <input type="checkbox"/> Plastic                                                                                                  |  |
|                                                                                                                                                                     |                                                                               |                                                                                        |  | <input type="checkbox"/> Glass                                                                                                    |  |
|                                                                                                                                                                     |                                                                               |                                                                                        |  | <input type="checkbox"/> Paper                                                                                                    |  |
|                                                                                                                                                                     |                                                                               |                                                                                        |  | <input type="checkbox"/> Other (Specify) _____                                                                                    |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            |  | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               |                                                                                        |  | <input type="checkbox"/> Other _____                                                                                              |  |

## Section - IV

|                                                                                                                                                                                                                                                                             |  |                                          |  |                                                     |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------|--|-----------------------------------------------------|--|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                               |  |                                          |  |                                                     |  |
| Name<br>Stephen L. Longacre, Ph.D.                                                                                                                                                                                                                                          |  | Title<br>Product Registration Manager    |  | Telephone No. (Include Area Code)<br>215 - 592-3581 |  |
| Certification<br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |  |                                          |  | 6. Date Application Received                        |  |
| 2. Signature<br><i>Stephen L. Longacre</i>                                                                                                                                                                                                                                  |  | 3. Title<br>Product Registration Manager |  | (Stamped)                                           |  |
| 4. Typed Name<br>Stephen L. Longacre, Ph.D.                                                                                                                                                                                                                                 |  | 5. Date<br>February 01, 2001             |  |                                                     |  |





United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

275862

## Application for Pesticide - Section I

1. Company/Product Number

2. EPA Product Manager

3. Proposed Classification

4. Company/Product (Name)

PM#

☐ None ☐ Restricted

5. Name and Address of Applicant (Include ZIP Code)

6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. \_\_\_\_\_

Product Name \_\_\_\_\_

☐ Check if this is a new address

## Section - II

☐ Amendment - Explain below.

☐ Resubmission in response to Agency letter dated \_\_\_\_\_

☐ Notification - Explain below.

☐ Final printed labels in response to Agency letter dated \_\_\_\_\_

☐ "Me Too" Application.

☐ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

## Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging

☐ Yes\*  
☐ No

Unit Packaging

☐ Yes  
☐ No

Water Soluble Packaging

☐ Yes  
☐ No

2. Type of Container

☐ Metal  
☐ Plastic  
☐ Glass  
☐ Paper  
☐ Other (Specify) \_\_\_\_\_

**Certification must be submitted**

If "Yes" Unit Packaging wgt.

No, per container

If "Yes" Package wgt

No, per container

3. Location of Net Contents Information

☐ Label ☐ Container

4. Size(s) Retail Container

5. Location of Label Directions

☐ On Label  
☐ On Labeling accompanying product

6. Manner in Which Label is Affixed to Product

☐ Lithograph  
☐ Paper glued  
☐ Stenciled

☐ Other \_\_\_\_\_

## Section - IV

1. Contact Point (Complete names directly below for identification of individual to be contacted, if necessary, to process this application.)

Name

Title

Telephone No. (Include Area Code)

## Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received  
(Stamped)

2. Signature

3. Title

4. Typed Name

5. Date



## PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

**PAPERWORK REDUCTION ACT NOTICE:** Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

**INSTRUCTIONS:** This form is to be used for all applications for new registration, end use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.61 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

**Submission of Labeling** - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

**Submission of Data** - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

**SPECIFIC INSTRUCTIONS:** Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

**Block A** - Check the appropriate action for which you are submitting this form.

**SECTION I** - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

**SECTION II** - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

**SECTION III** (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.





United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

275862

## Application for Pesticide - Section I

|                                                                                                                    |                                                                                                                                                                                      |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Company/Product Number                                                                                          | 2. EPA Product Manager                                                                                                                                                               | 3. Proposed Classification<br><input type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)                                                                                          | PM#                                                                                                                                                                                  |                                                                                                 |
| 5. Name and Address of Applicant (Include ZIP Code)<br><br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                 |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

## Section - III

|                                                                                                                                                                     |                                                                               |                                                                                        |  |                                                                                                                                                                                          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |  | 2. Type of Container                                                                                                                                                                     |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No |  | <input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |  |
| If "Yes" Unit Packaging wgt. No. per container                                                                                                                      |                                                                               | If "Yes" Package wgt. No. per container                                                |  |                                                                                                                                                                                          |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            |  | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product                                                        |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               |                                                                                        |  | <input type="checkbox"/> Other _____                                                                                                                                                     |  |

## Section - IV

|                                                                                                                                                                                                                                                                             |       |                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                               |       |                                           |
| Name                                                                                                                                                                                                                                                                        | Title | Telephone No. (Include Area Code)         |
| 2. Signature                                                                                                                                                                                                                                                                |       | 3. Title                                  |
| 4. Typed Name                                                                                                                                                                                                                                                               |       | 5. Date                                   |
| Certification<br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |       | 6. Date Application Received<br>(Stamped) |



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4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
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3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
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1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

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3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.





February 1, 2001

Document Processing Desk (AMEND)  
Office of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biopesticides and Pollution Prevention Division  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

SLL-01-042

Dear Mr. Benmhend:

**Subject: EthylBloc® Technology (EPA Regis. No. 71297-1)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Alternate Formulation Amendment**

AgroFresh, Inc. (formerly BioTechnologies for Horticulture, Inc.), a fully-owned subsidiary of Rohm and Haas Company, submits an alternate formulation for EthylBloc® Technology which contains 0.14% 1-methylcyclopropene (1-MCP) active ingredient. The proposed alternate formulation contains a maximum amount of

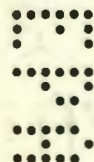
████████████████████ compared to currently approved formulations of EthylBloc®. No other ingredients have been added to the formulation, and the concentration of 1-MCP active ingredient remains at 0.14%. A Confidential Statement of Formula (CSF) showing the composition of the proposed new alternate formulation of EthylBloc® Technology is attached.

Please contact me by phone (215-592-3581), fax (215-592-3414), or email (rstysl@rohmmaas.com) if you have any questions about this submission.

Sincerely,

*SL Longacre*

Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department



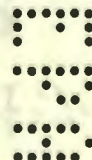
Mr. D. Bernhend  
01Feb01  
Page 2

Administrative materials submitted with this letter:

- 1) EPA Form 8570-1 (OPP Identifier 267602);
- 2) Confidential Statement of Formula; EthylBloc; Alternate Formulation;  
01Feb01.

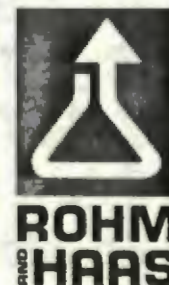


RECYCLING IS  
GOOD CHEMISTRY





453171-00



January 29, 2001

Document Processing Desk (7504C)  
Office of Pesticide Programs (7504C)  
U.S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biopesticides & Pollution Prevention Division  
Room 266A, Crystal Mall #2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

SLL-01-037

Dear Mr. Benmhend:

**Subject: EthylBloc® Technology (EPA Reg. No. 71297-1)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Food-Use Section 3 Registration Petition (OF 6144)**  
**Air Dispersion Modeling Study**

Rohm and Haas Company, and its subsidiary AgroFresh, Inc. (formerly BioTechnologies for Horticulture, Inc.), submits the attached 1-methylcyclopropene (1-MCP) air dispersion modeling study in support of our EthylBloc Technology food-use Section 3 registration petition (OF 6144), originally submitted 06Apr00.

The report presents results of reasonable worst-case air dispersion modeling for 1-MCP after release from insulated concrete controlled atmosphere storage rooms used to treat fruit. The modeling exercise used a standard EPA air dispersion model (Industrial Source Complex ISCST3), and a reasonable worst-case exposure scenario to predict downwind airborne concentrations of 1-MCP at defined distances from the venting source. Results indicate that worst-case predicted airborne concentrations of 1-MCP quickly fall well below 1 ppb.

Please assign an MRID number to this study, and contact me by phone (215-592-3581), fax (215-592-3414), or email (rstysl@rohmmaas.com) if you have any questions about this report.

Sincerely,

Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department



EPA/D. Benmhend  
29Jan01  
Page 2

Attachments (report in triplicate):

| Guideline<br>Reference<br>Number | Rohm and Haas<br>Company<br>Report<br>Number | Report Title                                                                                                                                                      | MRID     |
|----------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| NA                               | 00R-1066                                     | W. D. Shade; 1-Methylcyclopropene (1-MCP): Industrial Source Complex (ISCST3) Dispersion Modeling of Air Emissions from Controlled Atmosphere Facilities; 17Jan01 | 45317101 |

Additional Attachment:

- 1) EPA Form 8570-1 (OPP Identifier Number 250075)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

I, Sheryl K. Reilly, Chief, Biochemical Pesticides Branch, Biopesticides and Pollution Prevention Division, Office of Pesticide Programs, Office of Prevention, Pesticides and Toxic Substances, United States Environmental Protection Agency ("EPA"), certify that the pesticide product listed below is, as of the date of this letter, a registered product under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, and that as such, the products may be sold and marketed in the United States of America as authorized and limited by FIFRA. A true and correct copy of the product label approved by EPA is attached to accompany this letter.

Registration of this product with EPA also denotes that the registrant listed below is responsible for ensuring full compliance with all laws of the United States of America, or governing jurisdiction, regarding the sale, storage and/or disposal of the product. Further, the recipient of this letter is on notice that the status of the referenced registration and/or the accompanying label may change subsequent to the date of this letter. EPA assumes no responsibility to notify the recipient of this letter of any change in the status of the registration and/or the product label for the product listed below. EPA has issued a registration number for the product listed below to:

Biotechnologies for Horticulture, Inc.  
751 Thunderbolt Road  
Walterboro, SC 29488

**EPA REGISTRATION NUMBER**

71297-1

**NAME OF PRODUCT**

EthyBloc



*Sheryl K. Reilly*  
Sheryl K. Reilly, Chief  
Biochemical Pesticides Branch

**JAN 19 2001**

[Date]

**CONCURRENCES**

|         |         |  |  |  |  |  |  |
|---------|---------|--|--|--|--|--|--|
| SYMBOL  | Reilly  |  |  |  |  |  |  |
| SURNAME | 751C    |  |  |  |  |  |  |
| DATE    | 1-19-01 |  |  |  |  |  |  |

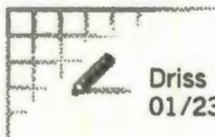
EPA Form 1320-1A (1/90)

Printed on Recycled Paper

OFFICIAL COPY

256





Driss Benmhend  
01/23/2001 09:53 AM

To: Russell Jones/DC/USEPA/US@EPA  
cc:  
Subject: 1-MCP Toxicology Studies

----- Forwarded by Driss Benmhend/DC/USEPA/US on 01/23/2001 09:53 AM  
-----



Stephen\_L\_Longacre@RohmHaas.Com (Stephen L Longacre) on 01/18/2001  
02:58:38 PM

To: Driss Benmhend/DC/USEPA/US@EPA  
cc: Sheryl Reilly/DC/USEPA/US@EPA, George\_A\_Dr.\_Hazelton@RohmHaas.Com (George A Dr. Hazelton)  
Subject: 1-MCP Toxicology Studies

Driss,

As we discussed, we are developing 1-MCP for worldwide use, and, as you are well aware, some regulatory agencies outside of the US require more data than required by your Biopesticides Division to register biochemical pesticide-like products such as 1-MCP. I indicated that we have initiated or plan to initiate several 1-MCP studies for both worldwide (non US) registrations and Product Stewardship reasons.

Attached is a summary of the ongoing and planned studies. The concentrations of 1-MCP administered in these studies were 100-1000 times greater than the 1 ppm proposed use concentration.

I mention these studies to you now, because the slight blood and spleen effects observed in the two-week rat range-finding inhalation study will likely require a FIFRA 6(a)2 submission within the next month (newly observed effects in a new tox study), and I wanted to let you know that you would be cc'd on this submission. It is possible that additional FIFRA 6(a)2 reports will be submitted during the year as we conduct these new toxicology studies. We can discuss further at Tuesday's meeting.

Regards,

Steve Longacre  
Rohm and Haas Company  
T: 215-592-3581  
Email: rstysl@rohmmaas.com



tox2.doc



## Meeting with R2H:

Le 23 Jan 01.

② ) Thing. Review completed by end of Feb.  
Ask if everything ok → 2 months to complete.  
Publish final rule -

④ Submit an EIP for 3.3% 1-MCP in Spring.  
↳ & a set 3 by July.

Look for Steve's Comments on tele. Comments received -

MRID #

Check with them about MRID



December 12, 2000

Mr. Driss Benmhend  
Biopesticides & Pollution Prevention Division  
Office of Pesticide Programs (7511C)  
U.S. Environmental Protection Agency  
Room 902, Crystal Mall #2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

SLL-00-292

Dear Mr. Benmhend:

**Subject: EthylBloc® Technology (EPA Reg. No. 71297-1)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Request for Meeting**  
**Proposed Meeting Agenda**

I request a meeting between EPA BPPD and Rohm and Haas in early to mid January, 2001 to discuss the following items:

- 1) Status/timing of 1-methylcyclopropene (1-MCP) exemption from the requirement of tolerance petition;
- 2) Status/timing of EthylBloc® technology (0.14% 1-MCP formulation) food-use registration;
- 3) Timing of petition to amend current 0.14% EthylBloc apple EUP to crop non-destruct EUP;
- 4) AgroFresh™ technology (3.3% 1-MCP formulation) apple Experimental Use Permit filing and timing;
- 5) AgroFresh™ technology (3.3% 1-MCP formulation) Section 3 food-use registration filing and timing;
- 6) Data requirements for a 0.14% 1-MCP alternate formulation containing largely [REDACTED]; and
- 7) Data requirements for a 0.14% 1-MCP alternate formulation containing approximately [REDACTED].

Items 1 and 2: AgroFresh, Inc. (formerly BioTechnologies for Horticulture, Inc.), a fully-owned subsidiary of Rohm and Haas Company, submitted a petition for an exemption from the requirement of tolerances for 1-MCP residues on food commodities, and a Section 3 registration petition for EthylBloc technology use on fruits and vegetables post harvest on 06Apr00. We would like to review the status and timing for review of these petitions to help us with our commercial planning.

D. Benmhend  
12Dec00  
Page 2

Item 3: We were granted approval in October, 2000 for a crop-destruct EUP for use of EthylBloc technology on apples. We would like to update the Agency on the status of this EUP, and discuss timing and the process for amending the EUP to a crop non-destruct EUP. The treated apples will come out of storage in early April, 2001.

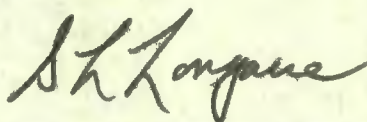
Items 4 and 5: We have developed a process for making a stable 3.3% 1-MCP formulation [REDACTED], and are currently conducting acute toxicity, mutagenicity, and physical chemistry studies in support of an apple EUP and our Section 3 food-use registration petitions. We plan to file these petitions in mid to late February, 2001, and request the Section 3 registration (or at least the crop non-destruct EUP) by July in time for the apple storage treatment season which runs from late August to early November.

Items 6 and 7: We are considering an 0.14% 1-MCP alternate formulation that contains mostly [REDACTED]. We are also considering a 0.14% 1-MCP alternate formulation that contains [REDACTED]. We would like to know what, if any, additional requirements the Agency might request for these alternate 0.14% formulations.

A two hour meeting is requested to discuss the above items, which are crucial for our commercial development plans. I request that Sheryl Reilly, the reviewer of the tolerance exemption and the 0.14% EthylBloc technology food-use petitions, and any other interested BPPD staff, in addition to yourself, attend. Rohm and Haas will be represented by Dr. George Hazelton (Toxicology Dept) and myself.

Please contact me by phone (215-592-3581), fax (215-592-3414), or email (rstysl@rohmmaas.com) with your availability.

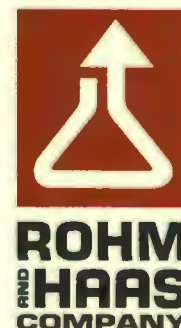
Sincerely,



Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

cc: Sheryl Reilly (EPA BPPD)  
George Hazelton (RH)





November 21, 2000

Mr. Driss Benmhend  
Office of Pesticide Programs  
Biopesticides & Pollution Prevention Division  
U.S. Environmental Protection Agency  
Room 266A, Crystal Mall #2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

SLL-00-275

Dear Mr. Benmhend:

**Subjects: EthylBloc® (EPA Reg. No. 71297-1-32258)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Clarification Sticker for Containers**

Floralife, Inc. (Walterboro, SC) is our sub-registrant for EthylBloc use on flowers, potted plants, and ornamentals. Rohm and Haas Company's 1-methylcyclopropene (1-MCP) Section 3 food use and exemption from tolerance petitions will hopefully be reviewed and approved very soon. Because of the large amount of favorable interest and publicity generated so far regarding the future use of 1-MCP on food crops, we have requested Floralife, Inc. to add the following circular sticker to the containers of all of their EthylBloc flower-use products to clarify that EthylBloc may not yet be used on food or food crops.

NOT FOR  
USE ON  
FOOD OR  
FOOD CROPS

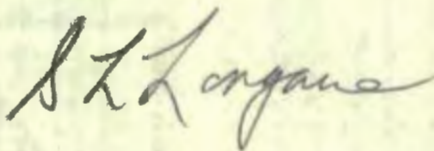
261

Mr. D. Benmhend  
21Nov00  
Page 2

We are asking Floralife, Inc. to do this to avoid any possible confusion in the marketplace before the 1-MCP food-use registrations are granted. We believe that the stickers are the fastest and most efficient manner to accomplish this clarification.

Please contact me by phone (215-592-3581), fax (215-592-3414), or email (rstysl@rohmmaas.com) if you have any questions about .

Sincerely,



Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

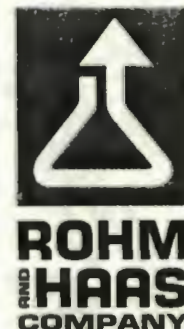
cc: Sheryl Reilly / EPA BPPD



RECYCLING IS  
GOOD CHEMISTRY

262





November 20, 2000

Document Processing Desk (AMEND)  
Office of Pesticide Programs (7504C)  
Mr. Driss Benmhend  
Biopesticides & Pollution Prevention Division  
U.S. Environmental Protection Agency  
Room 266A, Crystal Mall #2  
1921 Jefferson Davis Highway  
Arlington, VA 22202-4501

SLL-00-273

Dear Mr. Benmhend:

**Subjects: EthylBloc® Technology (EPA Reg. No. 71297-1; 71297-EUP-1)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Change of Subsidiary Name Holding Registrations to**  
**AgroFresh, Inc. (formerly BioTechnologies for Horticulture, Inc.)**  
**Draft Label Amendments Indicating AgroFresh, Inc. Name**

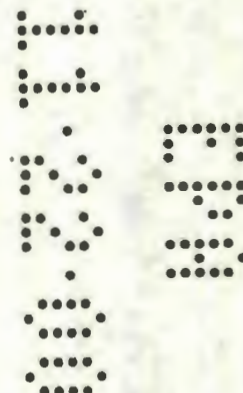
Rohm and Haas Company has changed the name of its subsidiary holding the registrations for EthylBloc® Technology (EPA Reg. No. 71297-1 and 71297-EUP-1) to AgroFresh, Inc. (formerly BioTechnologies for Horticulture, Inc.). I have attached documentation for this name change, and submit revised draft labels for our EthylBloc Section 3 food use petition (filed 06Apr00) and for our EthylBloc apple Experimental Use Permit (approved 12Oct00) indicating the name change to AgroFresh, Inc.

Please contact me by phone (215-592-3581), fax (215-592-3414), or email (rstysl@rohmmaas.com) if you have any questions about this name change or the amended draft labels.

Sincerely,

Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

cc: Sheryl Reilly / EPA BPPD





751 Thunderbolt Rd  
Waterboro SC 29488  
Phone: 843-538-3839

**Floralife Inc.**

# Fax

**To:** Diana Hudson - US EPA

**From:** James Daly

**Fax:** 703-308-7026

**Date:** November 29, 2000

**Phone:**

**Pages:**

**Re:** Reg. # 71297-1EthylBloc

**CC:**

**Urgent**

**x For Review**

**Please Comment**

**Please Reply**

**Please**

**Recycle**

**•Comments:**

Dear Ms Hudson

As per our phone conversation please release the requested gold seals to the Rohm and Haas Company. Also please note that Biotechnologies for Horticulture has been sold to Rohm and Haas. Please call me with any questions.

Jim Daly

Chief Operating Officer

Biotechnologies For Horticulture, Inc.

751 Thunderbolt Rd

Walterboro, SC 29488

label date: 3/00



November 15, 2000

Diana Hudson  
Office of Pesticide Programs (7504C)  
U.S. Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

SLL-00-269

Dear Ms. Hudson:

**Subject: Request for Gold Seal Letter for EthylBloc (EPA Reg No. 71297-1)**

I request that EPA send me 10 copies of a gold seal letter for EthylBloc (EPA Registration No. 71297-1). EthylBloc is registered to BioTechnologies for Horticulture, Inc., which is a fully owned subsidiary of Rohm and Haas Company. Please send the letters to:

Stephen L. Longacre  
Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA 19106-2399

Please contact me by telephone at 215-592-3581 or email at [rstysl@rohmhaas.com](mailto:rstysl@rohmhaas.com) if you have any questions about this request.

Sincerely,

Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

Rec'd.  
NOV 20 2000  
BPPD



# BPPD PRAT ACTION CODING FORM

PM 90: Janet Andersen

REVIEWER: Driss/Bernhard  
(ASSIGNED BY: SKR)

EPA REG./FILE SYMBOL 71297-EUP-R or -1?

ACTION CODE 744

(NEW a.i./EUPs/Tolerances: Yes        / No       )

*Amend. EUP*

SUBMISSION BARCODE 5587257

DATE ON APPLICATION 10/03/00

EPA RECEIVED DATE 10/05/00

PM RECEIVED DATE 10/13/00

ASSIGNED IN PRAT: YES X NO       

COMPLETED BY: T. Bethea DATE: 10/26/00



## FINAL ACTION

Response Code                     

Response Date:                     

MOS:                      (1) Cite-All  
                     (4) Not Applicable  
                     (8) Selective

CRP: Yes        No       

Restricted Use: Yes        No       

Manufacturing Use: Yes        No       

Exclusive Use: Yes        No       

*Driss -  
did the EUP  
even go to SIC  
for coding?*



October 3, 2000

Mr. Driss Benmhend  
Biopesticides & Pollution Prevention Division  
Office of Pesticide Programs (7511C)  
U.S. Environmental Protection Agency  
Room 902, Crystal Mall #2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

SLL-00-233

Dear Mr. Benmhend:

**Subject: EthylBloc® Technology (EPA Reg. No. 71297-EUP-B)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Final Label for an Experimental Use Permit on Apples**

Attached is a final label for an Experimental Use Permit for EthylBloc on apples. Again, we wish to register this product for experimental use to conduct large scale commercial indoor post-harvest trials of EthylBloc on apples later in mid October.

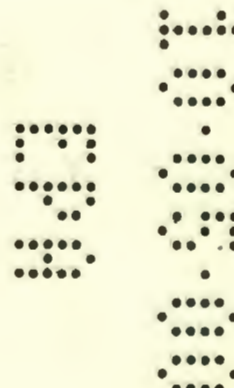
Please contact me by phone (215-592-3581), fax (215-592-3414), or email (rstysl@rohmhaas.com) if you have any questions about this final label.

Sincerely,

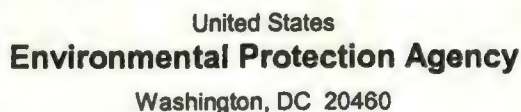
Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

Administrative materials submitted with this letter:

- 1) EPA Form 8570-1 (OPP Identifier 264748);
- 2) EUP Label (EUP-1, 10/3/00) (5 copies)







**Registration**  
**Amendment**  
**Other**

OPP Identifier Number

~~264748~~

201031

|                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                      |                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 1. Company/Product Number<br>71297-EUP- <u>R</u>                                                                                                                                                                                                                        | 2. EPA Product Manager<br>Driss Benmhend                                                                                                                                                             | 3. Proposed Classification                                                   |
| 4. Company/Product (Name)<br>EthylBloc®                                                                                                                                                                                                                                 | PM#                                                                                                                                                                                                  | <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 5. Name and Address of Applicant (Include Zip Code)<br><br>BioTechnologies for Horticulture, Inc.;<br>a subsidiary of Rohm and Haas Company<br>100 Independence Mall West<br>Philadelphia, PA 19106-2399<br><br><input type="checkbox"/> Check if this is a new address | 6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br><br>EPA Reg. No. _____<br><br>Product Name: _____ |                                                                              |

|                          |                                                       |                          |                                                               |
|--------------------------|-------------------------------------------------------|--------------------------|---------------------------------------------------------------|
| <input type="checkbox"/> | Amendment - Explain below.                            | <input type="checkbox"/> | Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> | Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> | "Me Too" Application.                                         |
| <input type="checkbox"/> | Notification - Explain below.                         | <input type="checkbox"/> | Other - Explain below.                                        |

Section - III

|                                                                                                                     |  |                                                                                                                                                                       |  |                                                                                                                                                                                |  |                                                                                                                                                                                                                         |  |
|---------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Child-Resistant Packaging</b><br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                    |  | <b>Unit Packaging</b><br><input type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes"                      No. per<br>Unit Packaging wgt.        container |  | <b>Water Soluble Packaging</b><br><input type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes"                      No. per<br>Package wgt                container |  | <b>2. Type of Container</b><br><input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |  |
| <b>* Certification must be submitted</b>                                                                            |  |                                                                                                                                                                       |  |                                                                                                                                                                                |  |                                                                                                                                                                                                                         |  |
| <b>3. Location of Net Contents Information</b><br><input type="checkbox"/> Label <input type="checkbox"/> Container |  |                                                                                                                                                                       |  | <b>4. Size(s) Retail Container</b>                                                                                                                                             |  | <b>5. Location of Label Directions</b><br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product                                                                                |  |

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)


|                                    |                                       |                                                     |
|------------------------------------|---------------------------------------|-----------------------------------------------------|
| Name<br>Stephen L. Longacre, Ph.D. | Title<br>Product Registration Manager | Telephone No. (Include Area Code)<br>215 - 592-3581 |
|------------------------------------|---------------------------------------|-----------------------------------------------------|

## Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received\* .....

(Stamped)

|                                                                                                     |                                          |
|-----------------------------------------------------------------------------------------------------|------------------------------------------|
| 2. Signature<br> | 3. Title<br>Product Registration Manager |
|-----------------------------------------------------------------------------------------------------|------------------------------------------|

|                                             |                            |
|---------------------------------------------|----------------------------|
| 4. Typed Name<br>Stephen L. Longacre, Ph.D. | 5. Date<br>October 3, 2000 |
|---------------------------------------------|----------------------------|





**United States**  
**ENVIRONMENTAL PROTECTION AGENCY**  
 Washington, DC 20460

OPP Identifier Number

**201031**

Office of Pesticides Programs (7505C)

**Application for Experimental Use Permit to Ship and  
 Use a Pesticide for Experimental Purposes Only**

|                                                                                                                                                                               |  |                                                                                                                                                                                                            |                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>1. Type of Application</b><br><input type="checkbox"/> New <input type="checkbox"/> Amendment (See No. 2)<br><input type="checkbox"/> Extension (Give Permit Number below) |  | <b>2. Briefly explain (attach a separate sheet if necessary)</b><br><br>                                                                                                                                   |                                                   |
| <b>3. Name and Address of Firm/Person to Whom the Experimental Use Permit is to be issued (include Zip Code) (Type or Print)</b><br><br>                                      |  | <b>4. Name and Address of Shipper only if shipment is intended or if different from applicant's name and address (include Zip Code) (Type or Print)</b><br><br>                                            |                                                   |
| <b>5. Name of Product</b><br><br>                                                                                                                                             |  | <b>6. Is Product Registered with EPA?</b><br><input type="checkbox"/> No<br><input type="checkbox"/> Yes (Give Registration Number or File Symbol below)<br>Registration Number _____<br>File Symbol _____ |                                                   |
| <b>7. Total Quantity of Product Proposed for Shipment/Use</b><br>Pounds of formulated product _____<br>Pounds of active ingredient _____                                      |  | <b>8. Acreage or Area to be Treated</b><br><br>                                                                                                                                                            | <b>9. Proposed Period of Shipment/Use</b><br><br> |
| <b>10. Places from which Shipped</b><br><br>                                                                                                                                  |  | <b>11. Crop/Site to be Treated</b><br><br>                                                                                                                                                                 |                                                   |
| <b>12. Specify the name and number of the contact person most familiar with this application.</b><br><br>                                                                     |  | <b>13. Signature of Applicant or Authorized Firm Representative</b><br><br>                                                                                                                                |                                                   |
|                                                                                                                                                                               |  | <b>14. Title</b><br><br>                                                                                                                                                                                   | <b>15. Date Signed</b><br><br>                    |

**Certification**

This is to certify that food or feed derived from the experimental program will not be used or offered for consumption or sale for consumption, except by laboratory or experimental animals, if illegal residues are present in or on such food or feed.

I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment, or both, under applicable law.

**Below for EPA Use Only**

In any correspondence on this application, refer to this number

Received by:  
 EPA-OPP Registration Division  
 Washington, DC 20460

Normal review time indicates that processing of this application should be completed by (date)

Name of EPA Contact Person

Telephone Number





United States  
ENVIRONMENTAL PROTECTION AGENCY  
Washington, DC 20460

OPP Identifier Number

201031

Office of Pesticides Programs (7505C)

**Application for Experimental Use Permit to Ship and  
Use a Pesticide for Experimental Purposes Only**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                                                                                                                                                                                                         |                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1. Type of Application<br><br><input type="checkbox"/> New <input type="checkbox"/> Amendment (See No. 2)<br><br><input type="checkbox"/> Extension (Give Permit Number below)                                                                                                                                                                                                                                                                                                                                                                                                   |                                  | 2. Briefly explain (attach a separate sheet if necessary)                                                                                                                                               |                 |
| Permit Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |                                                                                                                                                                                                         |                 |
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| EPA Company Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  | 6. Is Product Registered with EPA?<br><br><input type="checkbox"/> No<br><input type="checkbox"/> Yes (Give Registration Number or File Symbol below)<br>Registration Number _____<br>File Symbol _____ |                 |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  | 14. Title                                                                                                                                                                                               | 15. Date Signed |
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| Below for EPA Use Only                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                                                                                                                                                                                                         |                 |
| In any correspondence on this application, refer to this number:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  | Received by:<br>EPA-OPP Registration Division,<br>Washington, DC 20460                                                                                                                                  |                 |
| Normal review time indicates that processing of this application should be completed by (date):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |                                                                                                                                                                                                         |                 |
| Name of EPA Contact Person                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Telephone Number                 |                                                                                                                                                                                                         |                 |





United States  
**ENVIRONMENTAL PROTECTION AGENCY**  
 Washington, DC 20460

OPP Identifier Number

201031

Office of Pesticides Programs (7505C)

**Application for Experimental Use Permit to Ship and  
 Use a Pesticide for Experimental Purposes Only**

## 1. Type of Application

☐

New

☐

Amendment (See No. 2)

☐

Extension (Give Permit Number below)

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EPA Company Number

## 5. Name of Product

## 6. Is Product Registered with EPA?

☐

No

☐

Yes (Give Registration Number or File Symbol below)

Registration Number \_\_\_\_\_

File Symbol \_\_\_\_\_

## 7. Total Quantity of Product Proposed for Shipment/Use

Pounds of formulated product \_\_\_\_\_

Pounds of active ingredient \_\_\_\_\_

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## 10. Places from which Shipped

## 11. Crop/Site to be Treated

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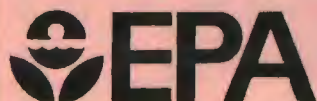
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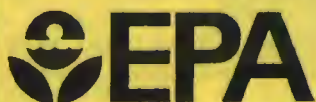
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Telephone Number



## INSTRUCTIONS

Refer to 40 CFR 172 for regulations regarding experimental use permits. These regulations were published in the FEDERAL REGISTER on April 30, 1975 (40 FR 18780). Complete all (and only) numbered items on the application form. If an EPA Company Number (Item 2) has not previously been assigned, indicate "None," and a number will be assigned on your acknowledgment copy of the form. Third party applicants (those who will be testing another firm's registered product) need not complete Item 13. On the acknowledgment copy of this form, you will be assigned a File Number or Symbol for identification of this application. An expected completion date and the name of your EPA Contact will be entered. You may call your EPA Contact if you have not received your permit or a letter of explanation by the date indicated.

### Experimental Use Permit Data Submission

The following information must be submitted in triplicate and in detail (bound in removable sections A through G with margin tabs) for all new chemicals and many new products. For some new formulations, the information requested in Items C, D, E, and F may be included by reference to other formulations if adequate extrapolation may be made. Where the applicant requests permission to test a registered product, the information requested in Items B, E, F, and G below, along with the EPA Registration Number of the product, will usually suffice. Refer to 40 CFR 158.640 [53 FR 15993, May 4, 1988] for further information.

- A. A data sheet giving the chemical and physical properties of the chemical. A complete statement of the names and percentages by weight of each Active and Inert ingredient in the formulation to be shipped. This information will be handled as confidential material.
- B. One copy of the proposed label including directions for use necessary for evaluation of the product. Refer to 40 CFR 172.6 for minimum labeling requirements. In certain circumstances the experimental program or other supplemental labeling may be permissible in lieu of full labeling. In such cases, submit a full explanation as to how the labeling will be affixed to or accompany the container.
- C. Toxicity data or reference to available data on the toxicity of the pesticide including, where pertinent, data on the toxicity to fish and wildlife. Include a summary of this information. LD<sub>50</sub> values and results of eye irritation studies on the formulated product must be included.
- D. Residue data, where pertinent, on (a) food or feed commodities; (b) nonfood crops such as tobacco; and (c) foliage or other sites which may relate to worker hazard or adverse effects on the environment. Include a description of the analytical method(s) used and a summary of the data.
- E. Effectiveness data [required only if specified in Regulations 40 CFR 158.640, 53 FR 15993, May 4, 1988 and Registration Guidelines 40 CFR 158.202(i), 53 FR 15993, May 4, 1988].
- F. If the pesticide is to be tested in a manner involving food or feed, and an adequate tolerance is not established to cover the use, file a petition for a temporary tolerance with this Agency and forward three copies with this application. If appropriate tolerances are established already, cite applicable Regulation in Title 40 of the Code of Federal Regulations.
- G. Proposed Experimental Program:
  - (1) Give the qualifications and the names, addresses, and telephone numbers of the individuals (participants) who will supervise the experimental work.
  - (2) Name the States in which the pesticide will be used and the acreage to be treated in each State. Where "acreage" does not apply, give extent of testing per State in more appropriate terminology. Indicate separately any other State(s) to which the pesticide may be shipped for further distribution.
  - (3) Give the details of the proposed program including the types of target pests or organisms, the crops, animals, surfaces, materials, buildings, or sites of application to be treated and the major geographical areas where the material is to be used. For seasonal pests or crops, indicate the desired month for pesticide application to begin. Specify the use pattern, intended plot sizes, number of plots, number of replicates, dosage rates, methods of application, season of use (spring, summer, fall) and timing of application (preplant, postemergence, multiple (indicate pattern and number), etc.).
  - (4) List the objectives of the proposed program including, e.g., what type(s) of data will be collected during the testing period (performance, yield, phytotoxicity, environmental residue, etc.). Indicate your long-range testing plans, including how many years you expect to conduct experimental testing in support of registration of this use. This information will be helpful in evaluating the currently proposed program.
  - (5) Submit an explanation to justify the quantity of the material requested, including various parameters used to determine the quantity. Quantities authorized will be based on the program submitted and consideration of the types and amount of data required to support registration.
  - (6) Propose a suitable duration for the permit commensurate with the program. Any request for a period greater than 1 year must be adequately justified.
  - (7) State the method of disposition of any unused material left at the conclusion of the testing program.

### Paperwork Reduction Act Notice

The public reporting burden for this collection of information is estimated to average three quarters of an hour including time for reviewing instructions, gathering existing product sources and addresses, shippers to be used and addresses, and completing this instrument. Send comments regarding this estimate or any other aspect of this process, including suggestions for reducing the burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460; Office of Management and Budget, Paperwork Reduction Project (2070-0040), Washington, DC 20503.

NOTE: Applicant may retain last copy  
(04-14-93)



**EthylBloc® Technology**  
**Application for Experimental Use Permit on Post-Harvest Apples**

**Section B**

**Proposed Labeling**

**EthylBloc® Technology**  
**(EPA Reg. No. 71297-EUP-\_\_\_)**

**Active Ingredient: 1-Methylcyclopropene (1-MCP); CAS No. 3100-04-7**

This section contains the proposed label for EthylBloc for indoor post-harvest use on apples. During the Experimental Use Permit program, use of the product will be restricted to application to apples. Directions for how much EthylBloc end-product formulation to use to release an effective concentration of 1-MCP active ingredient into a defined treatment chamber volume is indicated on the label.

The labeling included in this section is sufficient to support an application under FIFRA Section 5 for an Experimental Use Permit for the use of EthylBloc on a Raw Agricultural Commodity (RAC) crop, Apples.

276

EUP-1  
10/3/00

**FOR EXPERIMENTAL USE ONLY**

Not for sale to any person other than a Participant or Cooperator of the EPA approved Experimental Use Program. For use only at an application site of a cooperator in accordance with the terms and conditions of the Experimental Use Permit. This labeling must be in the possession of the user at the time of the pesticide application.

BioTechnologies for  
Horticulture, Inc.  
A subsidiary of Rohm and Haas Company  
Philadelphia, PA. 19106  
Tel: (215) 592-3000

**EthylBloc®  
Technology**

Active Ingredient: 1-Methylcyclopropene ..... 0.14%  
Other Ingredients: ..... 99.86%  
Total: ..... 100.00%

EPA REG. NO. 71297-EUP-

**NOTICE:** Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions. If the Conditions of Sale and Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**FIRST AID**

**IF IN EYES:** Flush with plenty of water for at least 15 minutes. Call a physician if irritation persists.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**IF SWALLOWED:** Dilute by drinking 1 or 2 glasses of water and call a physician.

**Net Contents:**

1.34 oz. [38 grams (water soluble packet)],  
2.6 oz. [75 grams (water soluble packet)] and 3.5 oz. [100 gram bottle]

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and mixers of this product must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Protective eyewear (goggles or face shield).
- Rubber gloves.
- As a general precaution when exposed to a volatile material, for activities in enclosed areas, wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- Applicators and handlers must follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling and the terms of the Experimental Use Permit.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Workers Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours from the initial release of the volatile active ingredient.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Long-sleeved shirt and long pants
- Rubber gloves
- Shoes plus socks
- Protective eyewear
- Respirator



#### CONDITIONS OF SALE AND WARRANTY

This product is for **EXPERIMENTAL USE ONLY**. BioTechnologies for Horticulture, Inc./Rohm and Haas Company makes no warranties or merchantability or fitness for a particular purpose nor any other express or implied warranty except as stated herein.

#### GENERAL INFORMATION

EthylBloc® technology (ripening control agent) is a powder that, when mixed with water, releases the volatile active ingredient 1-methylcyclopropene (1-MCP) which counteracts many of the undesirable effects of ethylene in harvested apples.

EthylBloc works by blocking the effects from both internal and external sources of ethylene.

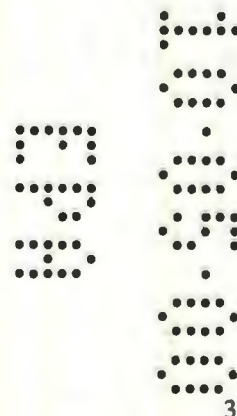
EthylBloc is very effective at counteracting many of the undesirable effects of ethylene on harvested apples, like accelerating ripening and softening, and physiological disorders.

EthylBloc can be used immediately after harvest, prior to short-term or long-term storage or just prior to shipment and upon arrival from the supplier. EthylBloc is more effective under warm temperature conditions, 55° to 75°F, (13° to 24° C). Longer treatment times are required for apples held under temperatures below 55°F, (13° C).

#### POST-HARVESTED APPLES

Harvested apples must be exposed to the volatile active ingredient of EthylBloc in enclosed areas such as storage rooms, greenhouses, coolers, shipping containers, enclosed truck trailers, plastic bags of at least 3 mil (63µm in thickness), or large controlled atmosphere food storage facilities. These enclosed areas should be fairly gas tight as excessive leakage will reduce EthylBloc effectiveness. This product is not intended for use outdoors or in other non-enclosed areas.

EthylBloc can be applied immediately after harvest, upon entering storage, in transit or at the distribution center. TABLE 1 gives the quantity of EthylBloc needed for treatment per room size. TABLE 2 indicates the dosage of EthylBloc recommended for apples.



**TABLE 1**

Application rates of EthylBloc technology for 1, 300 and 1000 m<sup>3</sup> chambers, and volume of water needed to release 1-MCP into the air.

| 1 m <sup>3</sup> Chamber |            | 300 m <sup>3</sup> Chamber |                | 1000 m <sup>3</sup> Chamber |                |
|--------------------------|------------|----------------------------|----------------|-----------------------------|----------------|
| grams EthylBloc          | water (ml) | grams EthylBloc            | water (liters) | grams EthylBloc             | water (liters) |
| 0.05                     | 0.8        | 15                         | 0.24           | 50                          | 0.8            |
| 0.16                     | 2.5        | 48                         | 0.75           | 160                         | 2.5            |
| 0.32                     | 5          | 96                         | 1.5            | 320                         | 5              |
| 0.48                     | 7.5        | 144                        | 2.25           | 480                         | 7.5            |
| 0.64                     | 10         | 192                        | 3.0            | 640                         | 10             |
| 0.80                     | 13         | 240                        | 3.9            | 800                         | 13             |
| 0.96                     | 15         | 288                        | 4.6            | 960                         | 15             |
| 1.12                     | 18         | 336                        | 5.4            | 1120                        | 18             |
| 1.28                     | 20         | 384                        | 6.0            | 1280                        | 20             |
| 1.44                     | 23         | 432                        | 6.9            | 1440                        | 23             |
| 1.60*                    | 25         | 480*                       | 7.5            | 1600*                       | 25             |

Note: 1 m<sup>3</sup> = 35.3 ft<sup>3</sup>

\*Amount EthylBloc needed to release approximately 1000 ppb (v/v) 1-MCP into the air in the respective chamber volume.

**TABLE 2**

Application rates of EthylBloc technology for post-harvest apples:

| Crop   | Response Affected  | grams EthylBloc/m <sup>3</sup> | Volume of release water (ml/m <sup>3</sup> ) |
|--------|--------------------|--------------------------------|----------------------------------------------|
| Apples | Firmness and scald | 0.8 - 1.6                      | 12.5 - 25                                    |

EthylBloc is more effective when apples are exposed to the volatile active ingredient for at least 6 to 12 hours under warm temperature conditions (55°F to 75°F, 13°C to 24°C). Higher use rates and longer treatment periods of at least 12 to 24 hours are required for applications at lower temperatures (below 55°F, 13°C).

**To treat with EthylBloc in large volume chamber:**

1. Measure the volume of the chamber/room/trailer in cubic meters or cubic feet.
2. Determine the number of grams of EthylBloc product and volume of water needed based on chamber volume and desired dosage of EthylBloc.
3. To mix:
  - a. Wear all Personal Protective Equipment (PPE) required under the Precautionary Statements.
  - b. First add warm water to mixing container (40° C ideal).
  - c. Then add the calculated amount of EthylBloc powder to the mixing container in the treatment chamber.
  - d. Briefly stir the mixture for 4-5 seconds and immediately leave the treatment chamber making sure the chamber is properly sealed.



- e. Alternatively, a remote location mixing device may be used.
- f. **POSTING:** Signs should be posted on all potential entry points during EthylBloc treatment. Signs should state "**CAUTION. Do not enter area. EthylBloc technology treatment progress.**" Posting is recommended as a means of ensuring optimal effectiveness of EthylBloc.

**Example:** Treat apples with 0.8 g EthylBloc product per m<sup>3</sup> in a sealed 5°C cold room measuring 3 m wide x 10 m long x 4 m high.

1. 3 m x 10 m x 4 m = 120 m<sup>3</sup>.
2. 0.8 g x 120 m<sup>3</sup> = 96 g of EthylBloc .
3. In mixing container, add 1.5 liters of water that is heated to 40°C.
4. Stir in EthylBloc (96 g) and seal room.
5. Maintain seal for desired treatment period.
6. After treatment period is complete, vent the active ingredient vapors from the room.
7. The room can now be opened and crops stored, processed or shipped.
8. Remaining treatment solution can be disposed of on site or at an approved waste disposal facility.

### **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in original packaging in a cool, dry place.

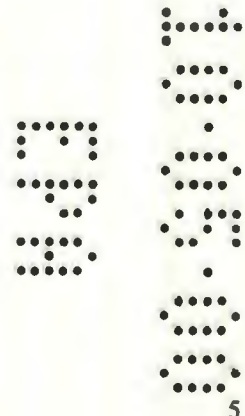
**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

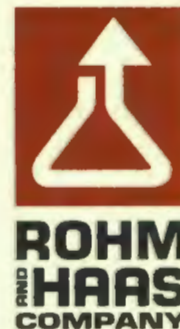
*EthylBloc is a registered trademark of BioTechnologies for Horticulture, Inc./Rohm and Haas Company*

**BioTechnologies for  
Horticulture, Inc.**  
A Fully-Owned Subsidiary of Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA. 19106  
(215) 592-3000

EUP-1  
SL/rdm  
10/3/00







September 26, 2000

Document Processing Desk (AMEND)  
Office of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Mr. Driss Benmhend  
Biochemical Pesticides Branch  
US EPA Biopesticides and  
Pollution Prevention Division  
Office of Pesticide Programs  
1921 Jefferson Davis Highway, CM2  
Arlington, VA 22202

SLL-00-227

Dear Mr. Benmhend:

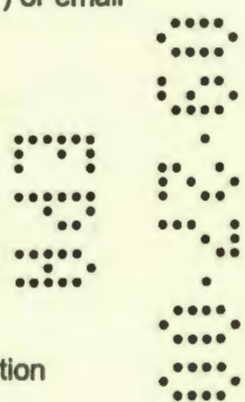
**Subject: EthylBloc® (EPA Regis. No. 71297-1)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Alternate Formulation Amendment**

BioTechnologies for Horticulture, Inc. (BTH)/Rohm and Haas Company submits an alternate formulation for EthylBloc®, which contains 0.14% 1-methylcyclopropene (1-MCP) active ingredient. The proposed alternate formulation contains [REDACTED] compared to currently approved formulations of EthylBloc®. No other ingredients have been added to the formulation, and the concentration of 1-MCP active ingredient remains at 0.14%. A Confidential Statement of Formula (CSF) showing the composition of the proposed new alternate formulation of EthylBloc® is attached.

Please indicate the Agency's approval of this alternate formulation to me at your earliest convenience; this alternate formulation will not be produced until I receive the Agency's approval. Please contact me by phone (215-592-3581) or email (rstysl@rohmhaas.com) if you have any questions about this submission.

Sincerely,

Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration



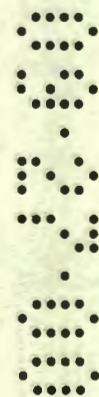
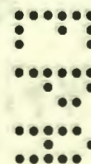
Mr. D. Bernhend  
26Sep00  
Page 2

Administrative materials submitted with this letter:

- 1) EPA Form 8570-1 (OPP Identifier 264747);
- 2) Confidential Statement of Formula; EthylBloc; Alternate Formulation;  
26Sep00.



RECYCLING IS  
GOOD CHEMISTRY





\*Inert ingredient information may be entitled to confidential treatment\*



United States  
Environmental Protection Agency  
Washington, DC 20460

|   |              |                                                             |
|---|--------------|-------------------------------------------------------------|
| X | Registration | OPP Identifier Number<br><b>277897</b><br><del>267607</del> |
|   | Amendment    |                                                             |
|   | Other        |                                                             |

### Application for Pesticide - Section I

|                                                                                                                                                                                                                                         |                                          |                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br>71297-1                                                                                                                                                                                                    | 2. EPA Product Manager<br>Driss Benmhend | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted                                                                           |
| 4. Company/Product (Name)<br>EthylBloc®                                                                                                                                                                                                 | PM#<br>92                                |                                                                                                                                                                                      |
| 5. Name and Address of Applicant (Include Zip Code)<br>BioTechnologies for Horticulture / Rohm and Haas Company<br>100 Independence Mall West<br>Philadelphia, PA 19106-2399<br><input type="checkbox"/> Check if this is a new address |                                          | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |

### Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

Alternate formulation for EthylBloc (active ingredient = 1-methylcyclopropene) containing approximately [redacted] with 0.14% 1-methylcyclopropene.

### Section - III

|                                                                                                                                                                     |                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                          |                      |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                          | 2. Type of Container |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes" No. per Unit Packaging wgt. container | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes" No. per Package wgt. container | <input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |                      |  |
| * Certification must be submitted                                                                                                                                   |                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                          |                      |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                                                                                 | 4. Size(s) Retail Container                                                                                                       | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product                                                        |                      |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                                                                                 | Other _____                                                                                                                       |                                                                                                                                                                                          |                      |  |

### Section - IV

|                                                                                                                                               |  |                                       |  |                                                     |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------|--|-----------------------------------------------------|--|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.) |  |                                       |  |                                                     |  |
| Name<br>Stephen L. Longacre, Ph.D.                                                                                                            |  | Title<br>Product Registration Manager |  | Telephone No. (Include Area Code)<br>215 - 592-3581 |  |
| 2. Signature<br>                                                                                                                              |  |                                       |  | 6. Date Application Received<br>(Stamped)           |  |
| 3. Title<br>Product Registration Manager                                                                                                      |  |                                       |  |                                                     |  |
| 4. Typed Name<br>Stephen L. Longacre, Ph.D.                                                                                                   |  |                                       |  | 5. Date<br>September 26, 2000                       |  |





United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

277897

**Application for Pesticide - Section I**

|                                                                                                                    |                                                                                                                                                                                      |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Company/Product Number                                                                                          | 2. EPA Product Manager                                                                                                                                                               | 3. Proposed Classification<br><input type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)                                                                                          | PM#                                                                                                                                                                                  |                                                                                                 |
| 5. Name and Address of Applicant (Include ZIP Code)<br><br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                 |

**Section - II**

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

**Section - III**

|                                                                                                                                                                     |                                                                               |                                                                                        |                                         |                                                                                                                                                                                          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |                                         | 2. Type of Container                                                                                                                                                                     |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No |                                         | <input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |  |
| * Certification must be submitted                                                                                                                                   |                                                                               | If "Yes" Unit Packaging wgt. No. per container                                         | If "Yes" Package wgt. No. per container |                                                                                                                                                                                          |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            |                                         | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product                                                        |  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               | <input type="checkbox"/> Other _____                                                   |                                         |                                                                                                                                                                                          |  |

**Section - IV**

|                                                                                                                                                                                                                                                                                    |          |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                                      |          |                                           |
| Name                                                                                                                                                                                                                                                                               | Title    | Telephone No. (Include Area Code)         |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |          | 6. Date Application Received<br>(Stamped) |
| 2. Signature                                                                                                                                                                                                                                                                       | 3. Title |                                           |
| 4. Typed Name                                                                                                                                                                                                                                                                      | 5. Date  |                                           |

## PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

**PAPERWORK REDUCTION ACT NOTICE:** Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2138), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

**INSTRUCTIONS:** This form is to be used for all applications for new registration, end use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

**Submission of Labeling** - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

**Submission of Data** - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

**SPECIFIC INSTRUCTIONS:** Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

**Block A** - Check the appropriate action for which you are submitting this form.

**SECTION I** - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

**SECTION II** - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

**SECTION III** (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.





United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

277897

## Application for Pesticide - Section I

|                                                                                                                    |                                                                                                                                                                                      |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Company/Product Number                                                                                          | 2. EPA Product Manager                                                                                                                                                               | 3. Proposed Classification<br><input type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)                                                                                          | PM#                                                                                                                                                                                  |                                                                                                 |
| 5. Name and Address of Applicant (Include ZIP Code)<br><br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                 |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

## Section - III

|                                                                                                              |                                                                               |                                                                                                                   |                                                                                                                                                                                          |                                                                                                                                |  |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                |                                                                               |                                                                                                                   |                                                                                                                                                                                          | 2. Type of Container                                                                                                           |  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                    | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No                            | <input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |                                                                                                                                |  |
| * Certification must submitted                                                                               |                                                                               | If "Yes" Unit Packaging wgt. No. per container                                                                    | If "Yes" Package wgt. No. per container                                                                                                                                                  |                                                                                                                                |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container |                                                                               | 4. Size(s) Retail Container                                                                                       |                                                                                                                                                                                          | 5. Location of Label Directions<br><input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product |  |
| 6. Manner in Which Label is Affixed to Product                                                               |                                                                               | <input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                                                                                                                                          | <input type="checkbox"/> Other _____                                                                                           |  |

## Section - IV

|                                                                                                                                                                                                                                                                             |          |                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                               |          |                                        |
| Name                                                                                                                                                                                                                                                                        | Title    | Telephone No. (Include Area Code)      |
| Certification<br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |          | 6. Date Application Received (Stamped) |
| 2. Signature                                                                                                                                                                                                                                                                | 3. Title |                                        |
| 4. Typed Name                                                                                                                                                                                                                                                               | 5. Date  |                                        |



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3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

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1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

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1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
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5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.





**ROHM  
AND  
HAAS  
COMPANY**

August 23, 2000

Wendy Sexsmith  
Health Canada  
Pest Management Regulatory Agency  
2250 Riverside Drive, P.L. 6605E  
Ottawa, Ontario K1A 0K9  
Canada

SLL-00-198

Janet Anderson  
U.S. Environmental Protection Agency  
Biopesticides and Pollution Prevention Division (7511C)  
Office of Pesticide Programs  
1921 Jefferson Davis Highway  
Arlington, VA 22202

Dear Ms. Sexsmith and Ms. Anderson:

**Subject: 1-Methylcyclopropene (1-MCP) EPA Discussions**

This letter grants authorization for PMRA and EPA personnel to discuss matters and review documents regarding all applications to register Rohm and Haas owned 1-MCP products, including discussions regarding confidential business information, and for EPA to release written documents and reviews to PMRA, including those containing confidential business information.

Please telephone me at 215-592-3581 if you have any questions about this letter.

Sincerely,

Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

cc: Peter MacLeod (Rohm and Haas Canada)  
Bob Larkin (Rohm and Haas US)  
Sheryl Reilly (EPA BPPD)  
Driss Benmhend (EPA BPPD)

DRAFT

May 9, 2000

Mr. Driss Benmhend  
Biopesticides & Pollution Prevention Division  
Office of Pesticide Programs (7511C)  
U.S. Environmental Protection Agency  
Room 902, Crystal Mall #2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

SLL-00-113

Dear Mr. Benmhend:

**Subjects: Major Points and Follow-Up Actions from our 04May00 Meeting on:**

**Rohm and Haas Company's / BioTechnologies for Horticulture, Inc.'s (BTH's) Label Amendment to Add Food Crops to the Current Label for EthylBloc® Technology (EPA Reg. No. 71297-1), and**

**Rohm and Haas Company's / BTH's Petition for an Exemption from the Requirement of Tolerances for Residues of 1-Methylcyclopropene (1-MCP) on Food Commodities**

*BioTechnologies  
(Technical ??)*

I would like to again thank you and your colleagues for meeting with us to discuss our recently submitted EthylBloc technology food-use petition, and our petition for an exemption from the requirement of tolerances for residues of 1-MCP (the active ingredient of EthylBloc) on food commodities. My understanding of the major points we discussed and agreed-upon follow-up actions are indicated below:

**Participants:**

EPA BPPD:

Driss Benmhend  
Sheryl Reilly  
Russell Jones  
Freshteh Toghrol

Rohm and Haas Company:

Stephen Longacre  
George Hazelton

**Clarification of EthylBloc Technology Ownership:**

EthylBloc, a solid end-use product which contains 0.14% 1-MCP active ingredient, was registered for non-food use on flowers and related materials in April, 1999 (EPA Reg. No. 71297-1) by BioTechnologies for Horticulture, Inc. (BTH), a subsidiary of Floralife, Inc. (Walterboro, SC). Floralife, Inc. utilized Technology Sciences



Group (Amy Roberts, et al) as their regulatory consultant.

Mr. Benmhend  
09May00  
Page 2

Rohm and Haas Company purchased BTH from Floralife, Inc. in December, 1999. BTH is now a fully-owned subsidiary of the Rohm and Haas Company, and owns the EthylBloc registration and all data supporting the registration. Rohm and Haas Company has subregistered Floralife, Inc. the use of EthylBloc on flowers in the U.S.

Rohm and Haas Company/BTH now wishes to register EthylBloc for indoor use on fruits and vegetables post-harvest, and we submitted our food-use registration petition on April 6, 2000.

**Rohm and Haas Company/BTH's April 6, 2000 EthylBloc Food-Use Submission:**

Our strategy to register EthylBloc for use on fruits and vegetables post-harvest consists of amending the current EthylBloc non-food use registration (EPA Reg. No. 71297-1) to include a number of food crops, along with submitting a petition for an exemption from the requirement of tolerances for 1-MCP residues on food commodities, and requesting waivers for all of those studies that were waived for the EthylBloc non-food use registration.

The following documents were submitted in support of the EthylBloc food-use registration:

- 1) Petition binder containing Sections A-J, which includes a draft product label for commercial food use, and a draft master non-commercial label containing both the current flower and proposed food uses.
- 2) Petition for an exemption from the requirement of tolerances for residues of 1-MCP on food commodities; Rohm and Haas Report No. 00R-1012; 04Apr00;
- 3) Rationale for waivers of study requirements for registration of 1-MCP use on post-harvested fruits and vegetables; Rohm and Haas Report No. AGREG-00-02; 04Apr00; and
- 4) FQPA Notice of Filing for 1-MCP on post-harvest fruits and vegetables; Rohm and Haas Report No. AGREG-00-01.

**Action:** Rohm and Haas/BTH will send the FQPA notice of filing document (AGREG-00-01) to Driss Benmhend electronically.

Six (6) crops are indicated on the draft food use label in the 06Apr00 submission, with apples being the most important of the submitted crops. Although we have some efficacy data on many other crops, we will periodically submit groups of crops to add to the EthylBloc food-use label after we have conducted additional efficacy studies to

determine the appropriate use-directions.

Mr. Benmhend  
09May00  
Page 3

I have been informed that our EthylBloc food-use petition passed the Agency's PR 86-5 screen. MRID numbers were assigned to my cover letter (Longacre to Benmhend, SLL-00-094; 06Apr00; MRID 450896-00), and our FQPA Notice of Filing (document #4 above; MRID 450896-01). MRID numbers were evidently not assigned to our petition for an exemption from tolerances (document #2 above) nor to our rationale for study waivers document (document #3 above).

**Action:** EPA/BPPD will have MRID numbers assigned to our petition for an exemption from tolerances (Rohm and Haas Report 00R-1012), and our rationale for study waivers document (Rohm and Haas Report AGREG-00-02), and will inform Rohm and Haas of these MRID numbers.

**Petition for Exemption from the Requirement of Tolerances for Residues of 1-MCP on Food Commodities:**

George Hazelton presented our rationale for requesting an exemption from the requirement of tolerances for 1-MCP on food commodities as contained in the submitted petition document (Rohm and Haas Report 00R-1012). Our rationale was based on the Agency's previous approach to granting exemptions from tolerances for ethylene and other plant growth regulators. Our estimates of residues of 1-MCP found in foodstuffs following treatment with EthylBloc are predicted to be extremely low (0.004 - 0.4 ppb), below reasonable quantifiable concentrations. These estimated levels of 1-MCP residues are based on the conservative assumption that all ethylene receptors are occupied by 1-MCP, along with submitted exposure data that shows that most of the 1-MCP in the treatment chambers is present at its nominal levels in the air above the food during the entire 6-24 hr treatment period. In the extreme worst-case, if one assumed that all (100%) of the 1-MCP in the chamber was on the food, which is not possible given that most of the 1-MCP is measured in the storage room air, then only 9 ppb 1-MCP would be calculated to be in/on the apples. Ten (10) ppb is a difficult detection limit for residues on food commodities. Since there would be predicted negligible residues on food commodities, there would be negligible exposure to consumers, and thus negligible risk to consumers.

*summed*  
EPA/BPPD agreed that our rationale for an exemption from tolerances for 1-MCP was reasonable, but pointed out that EPA scientists ~~outside of BPPD~~ *must review* may review this petition and that they may or may not agree with our rationale. *(We will inform them register of the our conclusions after the review is complete.)*

**Venting of 1-MCP from Treatment Chambers to Outside Air:**

We discussed that EPA/BPPD would like documentation indicating how fast it



takes for 1-MCP to dissipate from a treatment chamber during the venting process, and how fast and to what levels 1-MCP is diluted in the outside air.

**Action:** Rohm and Haas will prepare and submit documentation addressing the above points in support of our EthylBloc food-use petition.

Mr. Benmhend

09May00

Page 4

### Rationale for Waivers from Study Requirements in Support of the EthylBloc Food-Use Petition:

Rohm and Haas/BTH feels that it is appropriate to use the existing product chemistry and toxicology studies that supported the EthylBloc flower-use registration to support the EthylBloc food-use registration as well. The current EthylBloc database consists of 1) product chemistry, 2) six-study acute toxicity package, and 3) three mutagenicity studies, along with the submitted petition for an exemption from tolerances and the submitted study waiver rationale document. Our submitted waiver document is basically a reiteration of the waiver arguments used to support the flower-use registration; namely, indoor use with low application rates of a non-toxic material into treatment rooms that need to be sealed during the treatment period for efficacy reasons, and significant personal protective equipment requirements on the product label. Food-use applications may actually result in less potential worker exposure than the current flower-use, since there are not as many different application scenarios for food (essentially only indoor treatment chambers) as there are on the current flower label (trucks, greenhouses, etc.). Also, it is likely that for food-use applications, 1-MCP will be released from EthylBloc using a remote application device.

### Timing of EthylBloc Food-Use Registration:

I indicated that, prior to commercialization, we will be conducting large 3+ month efficacy trials in apples in huge storage facilities (greater than 1000 square meters) beginning this September or October. Since these trials would be in compliance with the 10 acre research trial restriction, an Experimental Use Permit (EUP) would not be needed. However, we urgently requested that the EthylBloc food-use registration be granted before these trials were initiated for us to avoid having to destroy all of these treated apples, which would cost us around \$500,000 to \$1,000,000. EPA/BPPD indicated that they would not grant a temporary exemption from tolerances for these trials even if they were conducted under an EUP. We agreed that there were not that many additional documents that needed to be reviewed for the EthylBloc food-use registration above and beyond those already reviewed and accepted for the EthylBloc flower/non-food use registration. However, EPA/BPPD indicated that a food-use registration by this September is unlikely, but a registration before the end of the large commercial trials (December, 2000 to February, 2001) may be doable (no promises), as 9-12 months is EPA/BPPD's current typical review time. EPA/BPPD indicated we might hear back on the acceptance of our petition for an exemption from the requirement of tolerances for 1-MCP residues on food commodities, and our rationale for waivers from

I don't remember clearly but I thought we gave a longer time period.  
14-18 mos

I don't know if we made it clear Temp. tol. exemp. takes as long as a human one!

(I don't think we said we would grant one just advise them it's not as fast as for humans)

promised release



study requirements within the next three months.

**Action:** Rohm and Haas/BTH requests EPA/BPPD to inform us as soon as possible regarding the acceptance of our exemption from tolerances and study waiver rationale petitions so we can discuss and/or prepare contingency plans.

Mr. Benmhend

09May00

Page 5

**Revised EthylBloc Flower Label:**

The California Department of Pesticide Regulation (CDPR) has recommended changes to the EthylBloc flower label that more accurately indicates Rohm and Haas Company's current ownership of BTH and the subregistrant relationship between Floralife, Inc. and Rohm and Haas/BTH. EPA/BPPD agreed that we could submit a revised flower-use label with the recommended changes (revised Registration Number, revised Floralife, Inc. Establishment Number, etc), along with a letter explaining the reasons for the modifications.

**Action:** Rohm and Haas/BTH will submit revised EthylBloc flower-use label and explanation letter.

**Registration Requirements for an Higher Containing 1-MCP [REDACTED] Product:**

I indicated that we foresee a need to manufacture and sell a formulation containing a higher amount of 1-MCP (i.e., a 1-5% 1-MCP product vs the current 0.14% 1-MCP product). The maximum treatment room exposure concentration of 1-MCP would remain at 1000 ppb v/v 1-MCP. EPA/BPPD indicated that this should be the subject of a separate meeting after they have had a chance to review the current EthylBloc food-use petition.

Please let me know if I have overlooked something or have not accurately captured any key points or action items. I can be reached by phone (215-592-3581), fax (215-592-3414), or Email (rstysl@rohmmaas.com) if you have any questions.

Sincerely,

Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration

and Regulatory Affairs Department

cc: Sheryl Reilly (EPA/BPPD)  
Russell Jones (EPA/BPPD)  
Freshteh Toghrol (EPA/BPPD)  
George Hazelton (Rohm and Haas)





**ROHM  
HAAS  
COMPANY**

April 6, 2000

Mr. Driss Benmhend  
Biochemical Pesticides Branch  
US EPA Biopesticides and  
Pollution Prevention Division (7511C)  
Office of Pesticide Programs  
1921 Jefferson Davis Highway, CM2  
Arlington, VA 22202

SLL-00-094

Dear Mr. Benmhend:

**Subjects: EthylBloc® Technology (EPA Regis. No. 71297-1)  
Active Ingredient = 1-Methylcyclopropene  
Label Amendment to Add Indoor Use on Post-Harvested Fruits  
and Vegetables  
Petition for Exemption from the Requirement of Tolerances for  
Residues of 1-Methylcyclopropene on Food Commodities**

The attached petition from BioTechnologies for Horticulture, Inc., requests a label amendment to register EthylBloc (EPA Regis. No. 71297-1) for indoor use on post-harvest fruits and vegetables, and requests that the Agency establish an exemption from the requirement of permanent tolerances for 1-methylcyclopropene (1-MCP) residues on food commodities.

The solid end-use product, EthylBloc, which contains 0.14% 1-MCP active ingredient, is currently registered for non-food use on flowers and related materials (EPA Regis. No. 71297-1). 1-MCP has been classified by EPA as a plant growth regulator structurally similar to ethylene and other naturally occurring plant materials, and eligible for a reduced data set requirement. 1-MCP is regulated by the Biopesticides and Pollution Prevention Division (BPPD) of EPA.

Rohm and Haas Company purchased BioTechnologies for Horticulture, Inc. from Floralife, Inc., in December, 1999, and subregistered Floralife, Inc., the use of EthylBloc on flowers at that time. We now wish to register EthylBloc for use on fruits and vegetables after harvest as well.

This petition requests the establishment of an Exemption from the Requirement of Permanent Tolerances of 1-MCP residues on the raw agricultural food commodities. Our rationale for this request is contained in a document submitted with this petition (Hazelton, 2000), and is based on 1-MCP's non-toxic mode of action, its low use rates, its similarity in structure to naturally occurring plant growth regulators and plant materials, its gaseous form at room temperature, and the predicted low residues on treated food below reasonable analytical detection limits.

*Pet. No.?*

**Conditions of First Registration:**

All data required to satisfy the conditions imposed at the time of the first registration for EthylBloc (22Apr99) have been submitted. A reduced toxicology data



set, along with waiver justifications, were required for the initial registration. Based on several meetings with EPA BPPD over the past several years, it is our understanding that EPA BPPD would require an FQPA notice of filing, a petition describing the rationale for an exemption from the requirement of tolerances for 1-MCP residues on food commodities, exposure/dissipation measurements during the use of 1-MCP, and waiver justifications for the remaining Tier 1 study requirements to support an indoor food use registration. Documents containing all of this additional information are included in this submission.

**Sections A (Product Chemistry) and B (Label Instructions):**

Reviews of all studies required for this indoor food use petition were completed in conjunction with the earlier petition for use of EthylBloc on flowers.

A proposed post-harvest fruit and vegetable commercial use label, and a proposed master (non-commercial) combined flower and post-harvest fruit and vegetable use label for EthylBloc are submitted with this petition.

We are not aware of any other outstanding data requirement in these disciplines which is unique for indoor use on food commodities, and all data requirements for registration have been satisfied.

**Section C (Toxicology):**

A reduced data set, along with waiver requests, were required for the initial non-food registration. Waiver justifications for subchronic toxicity and teratology studies are contained in this petition, and are also contained in a document submitted with this petition (Longacre, 2000).

We are not aware of any other outstanding data requirement in these disciplines which is unique for indoor use on food commodities, and all data requirements for registration have been satisfied.

**Sections D (Residue Chemistry) and F (Proposed Exemption from Tolerances):**

1-MCP counteracts the effects of ethylene by binding to ethylene receptors in plants. Based on the number of ethylene receptors in apples and tomatoes and the low use levels, predicted 1-MCP residues would be below 1 ppb, which are below reasonable detection limits. A petition for an exemption from the requirement of tolerances for 1-MCP residues on food commodities based on 1-MCP's non-toxic mode of action, its low use rates, its similarity in structure to naturally occurring plant growth regulators and plant materials, its gaseous form at room temperature, and its predicted low residues on treated food below analytical detection limits, is included with this petition (Hazelton, 2000).

Mr. Bernhend  
06Apr00  
Page 3

**Sections I (Ecological Effects) and J (Environmental Fate):**

Waiver justifications for ecotoxicology and environmental fate studies for this proposed indoor use of EthylBloc are included with this petition, and are contained in a separate document submitted with this petition (Longacre, 2000).

**Additional Items:**

An FQPA Notice of Filing for 1-MCP on post-harvest fruit and vegetables is included with this petition, and was recently submitted to you electronically. It is our conclusion that there is a reasonable certainty that no harm will result from aggregate exposure to 1-MCP residues to the US population, including infants and children.

A tolerance fee of \$12,550, as specified in the 1999 EPA tolerance fee schedule for an exemption from the requirement of a tolerance [Federal Register, 64 (101); 26May99; p 28386; Sec 180.33(c)], was recently sent to EPA's Headquarters Accounting Operations Branch in support of this petition. A copy of my letter and a copy of the check are attached.

***Since we are planning large indoor long-term food storage trials with EthylBloc beginning in late summer or early autumn, 2000, we request that the EthylBloc indoor food-use Section 3 registration be reviewed and granted before then to avoid a crop-destruct requirement for these large scale studies. If the Section 3 food-use registration cannot be granted by August, 2000, then we request a meeting to discuss provisions for an Experimental Use Permit by August, 2000 to avoid a crop-destruct requirement for the upcoming large trials.***

Please assign MRID numbers to the new reports submitted in support of this petition, and please contact me by phone (215-592-3581), fax (215-592-3414), or E-mail (rstysl@rohmmaas.com) if you have any questions about this submission.

Sincerely,



Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

cc: Cheryl Reilly  
EPA.BPPD

Robert Larkin  
Rohm and Haas Company

Mr. Driss Benmhend  
06Apr00  
Page 4

Attachments (reports in triplicate):

| Guideline Reference Number | Rohm and Haas Company Report Number | Report Title                                                                                                                                                                                                                                                                                                                                                   | MRID |
|----------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| PR Notice 97-1             | AGREG-00-01                         | 1-Methylcyclopropene on Post-Harvest Fruits and Vegetables; An Assessment of the Risk Criteria Established in the Food Quality Protection Act (FQPA) Supporting an Exemption from the Requirement of Tolerances for BioTechnologies for Horticulture, Inc. Pesticide Petition Unassigned (1-Methylcyclopropene on Post-Harvest Fruits and Vegetables); 05Apr00 |      |
| None Applicable            | AGREG-00-02                         | S. L. Longacre; Rationale for Waivers of Study Requirements for Registration of 1-Methylcyclopropene Use on Post-Harvested Fruits and Vegetables; 04Apr00                                                                                                                                                                                                      |      |
| None Applicable            | Rohm and Haas Report 00R-1012       | G. A. Hazelton; Petition for an Exemption from the Requirement of Tolerances for Residues of 1-Methylcyclopropene on Food Commodities; 04Apr00                                                                                                                                                                                                                 |      |

Administrative materials submitted with this letter:

- 1) EPA Form 8570-1 (OPP Identifier 267635);
- 2) Petition binder containing Sections A, B, C, D, E, F, G, I and J; plus Data Matrix Tables (new and previously submitted studies);
- 3) EPA Form 8570-34: Certification with Respect to Citation of Data;
- 4) Copy of my 06Apr00 letter (SLL-00-095) to EPA Accounting Operations Branch Headquarters plus copy of tolerance fee check; and
- 5) Proposed Labels for 71297-1 (Post-Harvest Fruits and Vegetables; BO 4/5/00) and 71297-1 (Master Flower and Post-Harvest Fruits and Vegetables; MO 4/5/00) (5 copies each).



|                                                                                            |          |                     |                              |
|--------------------------------------------------------------------------------------------|----------|---------------------|------------------------------|
| <br><b>United States</b><br><b>Environmental Protection Agency</b><br>Washington, DC 20460 | <b>X</b> | <b>Registration</b> | <b>OPP Identifier Number</b> |
|                                                                                            |          | <b>Amendment</b>    | <del>267630</del>            |
|                                                                                            |          | <b>Other</b>        | <b>271493</b>                |

**Application for Pesticide - Section I**

|                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                     |                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br>71297-1                                                                                                                                                                                          | 2. EPA Product Manager<br>Driss Benmhend                                                                                                                                                                                                                            | 3. Proposed Classification<br><br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br>EthylBloc®                                                                                                                                                                                       | PM#<br><div style="font-size: 2em; text-align: center;">92</div>                                                                                                                                                                                                    |                                                                                                                |
| 5. Name and Address of Applicant (Include Zip Code)<br><br>BioTechnologies for Horticulture, Inc.<br>100 Independence Mall West<br>Philadelphia, PA 19106-2399<br><br><input type="checkbox"/> Check if this is a new address | 6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. <u>538-256</u><br><br>Product Name: <u>Fertilizer Plus Fungicide XI (Fertilizer + Golden Eagle)</u> |                                                                                                                |

**Section - II**

|                                                                                                                                                                                                                    |                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Amendment - Explain below.<br><br><input type="checkbox"/> Resubmission in response to Agency letter dated _____<br><br><input type="checkbox"/> Notification - Explain below. | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____<br><input type="checkbox"/> "Me Too" Application.<br><br><input type="checkbox"/> Other - Explain below. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Explanation:** Label amendment to adjust 1-methylcyclopropene active ingredient content on product label from 0.11% to 0.14%, and adjust inert ingredient content on product label from 99.89% to 99.86%, plus revised Confidential Statements of Formula for the basic and an alternate formulation.

**Section - III**

|                                                                                                                                                                                                          |                                                                                                                                              |                                                                                                                                               |                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Material This Product Will Be Packaged In:</b>                                                                                                                                                     |                                                                                                                                              |                                                                                                                                               |                                                                                                                                                                                                                  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                                                                | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes"      No. per<br>Unit Packaging wgt.      container | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No<br>If "Yes"      No. per<br>Package wgt      container | 2. Type of Container<br><input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |
| * <b>Certification must be submitted</b>                                                                                                                                                                 |                                                                                                                                              |                                                                                                                                               |                                                                                                                                                                                                                  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                                                             | 4. Size(s) Retail Container                                                                                                                  | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product             |                                                                                                                                                                                                                  |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph <input type="checkbox"/> Other _____<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                                                                                              |                                                                                                                                               |                                                                                                                                                                                                                  |

**Section - IV**

|                                                                                                                                                                                                                                                                                    |                                          |                                                     |                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                                      |                                          |                                                     |                                                                                                        |
| Name<br>Stephen L. Longacre, Ph.D.                                                                                                                                                                                                                                                 | Title<br>Product Registration Manager    | Telephone No. (Include Area Code)<br>215 - 592-3581 |                                                                                                        |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |                                          |                                                     | 6. Date Application Received<br><div style="text-align: center;"> <br/>         (Stamped)       </div> |
| 2. Signature<br>                                                                                                                                                                                                                                                                   | 3. Title<br>Product Registration Manager |                                                     |                                                                                                        |
| 4. Typed Name<br>Stephen L. Longacre, Ph.D.                                                                                                                                                                                                                                        | 5. Date<br>March 8, 2000                 |                                                     |                                                                                                        |

United States  
**Environmental Protection Agency**  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

271493

**Application for Pesticide - Section I**

|                                                                                                                    |                                                                                                                                                                                      |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Company/Product Number                                                                                          | 2. EPA Product Manager                                                                                                                                                               | 3. Proposed Classification<br><input type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)                                                                                          | PM#                                                                                                                                                                                  |                                                                                                 |
| 5. Name and Address of Applicant (Include ZIP Code)<br><br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                 |

**Section - II**

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

**Section - III**

|                                                                                                                                                                     |                                                                               |                                                                                        |                                                                                                                                                                                          |                                                                                                                                   |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |                                                                                                                                                                                          | 2. Type of Container                                                                                                              |                   |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | <input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |                                                                                                                                   |                   |
| <b>Certification must submitted</b>                                                                                                                                 |                                                                               |                                                                                        |                                                                                                                                                                                          |                                                                                                                                   |                   |
| If "Yes" Unit Packaging wgt.                                                                                                                                        |                                                                               | No. per container                                                                      | If "Yes" Package wgt                                                                                                                                                                     |                                                                                                                                   | No. per container |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            |                                                                                                                                                                                          | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product |                   |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               |                                                                                        | <input type="checkbox"/> Other _____                                                                                                                                                     |                                                                                                                                   |                   |

**Section - IV**

|                                                                                                                                                                                                                                                                                    |          |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                                      |          |                                           |
| Name                                                                                                                                                                                                                                                                               | Title    | Telephone No. (Include Area Code)         |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |          | 6. Date Application Received<br>(Stamped) |
| 2. Signature                                                                                                                                                                                                                                                                       | 3. Title |                                           |
| 4. Typed Name                                                                                                                                                                                                                                                                      | 5. Date  |                                           |



## PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

**PAPERWORK REDUCTION ACT NOTICE:** Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

**INSTRUCTIONS:** This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

**Submission of Labeling** - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

**Submission of Data** - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

**SPECIFIC INSTRUCTIONS:** Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

**Block A** - Check the appropriate action for which you are submitting this form.

**SECTION I** - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical your product. The product must be similar or identical in both formulation and labeled uses.

**SECTION II** - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

**SECTION III** (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.



United States

## Environmental Protection Agency

Washington, DC 20460

☐ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

271493

## Application for Pesticide - Section I

|                                                                                                                    |                                                                                                                                                                                      |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Company/Product Number                                                                                          | 2. EPA Product Manager                                                                                                                                                               | 3. Proposed Classification<br><input type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)                                                                                          | PM#                                                                                                                                                                                  |                                                                                                 |
| 5. Name and Address of Applicant (Include ZIP Code)<br><br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                 |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

## Section - III

|                                                                                                                                                                     |                                                                               |                                                                                        |                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |                                                                                                                                                                                                                  |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | 2. Type of Container<br><input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |
| If "Yes" Unit Packaging wgt. _____ No. per container _____                                                                                                          |                                                                               | If "Yes" Package wgt. _____ No. per container _____                                    |                                                                                                                                                                                                                  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product                                                                                |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               | <input type="checkbox"/> Other _____                                                   |                                                                                                                                                                                                                  |

## Section - IV

|                                                                                                                                                                                                                                                                                    |          |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                                      |          |                                           |
| Name                                                                                                                                                                                                                                                                               | Title    | Telephone No. (Include Area Code)         |
| <b>Certification</b><br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |          | 6. Date Application Received<br>(Stamped) |
| 2. Signature                                                                                                                                                                                                                                                                       | 3. Title |                                           |
| 4. Typed Name                                                                                                                                                                                                                                                                      | 5. Date  |                                           |



## PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

**PAPERWORK REDUCTION ACT NOTICE:** Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20480.

**INSTRUCTIONS:** This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

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- 1-5. Self-explanatory.
6. EPA Use Only.





March 8, 2000

Mr. Driss Benmhend  
Biochemical Pesticides Branch  
US EPA Biopesticides and  
Pollution Prevention Division (7511C)  
Office of Pesticide Programs  
1921 Jefferson Davis Highway, CM2  
Arlington, VA 22202

SLL-00-074

Dear Mr. Benmhend:

**Subject: EthylBloc® (EPA Regis. No. 71297-1)**  
**Active Ingredient = 1-Methylcyclopropene**  
**Revised Label Amendment to Adjust Active Ingredient**  
**Content to 0.14%**

**Reference: Label Amendment Submitted 03Mar00 (SLL-00-068)**

BioTechnologies for Horticulture, Inc. submits the attached revised label amendment to indicate an adjustment in the nominal content of the active ingredient 1-methylcyclopropene (1-MCP) in the registered end-use formulation EthylBloc (EPA Regis. No. 71297-1) to 0.14% from the 0.11% indicated in our 03Mar00 label amendment submission. Revised Confidential Statements of Formula for both the basic and alternate formulations of EthylBloc reflecting the adjustment to 0.14% 1-MCP in the EthylBloc formulation are also attached.

EthylBloc was registered for use on flowers in April, 1999 by BioTechnologies for Horticulture, Inc. (BTH). Rohm and Haas purchased BTH in December, 1999, and subregistered Floralife Inc. (Walterboro, SC) the use of EthylBloc on flowers at that time.

My 03Mar00 label amendment indicated that we recently discovered that the actual 1-MCP ai content of the EthylBloc end-use formulation was about one-fourth of the 0.43% ai content indicated on the product label. I indicated that the decreased ai content was not due to any significant change in the manufacturing process, but that it was due to a less rigorous analytical procedure used by Floralife over the past several years. My 03Mar00 label amendment specified the nominal 1-MCP content as 0.11% in EthylBloc end-use product.

We quantify 1-MCP in EthylBloc end-use product by gas chromatography using a flame ionization detector, and using isobutylene as an internal standard. An aliquot of EthylBloc end-use product is dissolved in buffer solution in a sealed vial, and after equilibration, a sample of the headspace gas is analyzed.



Mr. Benmhend  
08Mar00  
Page 2

The 0.11% ai nominal concentration was determined using an injection port temperature of 250 deg C during the gas chromatographic analysis. Earlier this week, after I had submitted by 03Mar00 label amendment to the Agency, our researchers conducted additional analyses of 1-MCP in EthylBloc using an injection port temperature of 150 deg C in an attempt to reduce a small amount of an apparent degradation product observed in the analysis. Quantitation of 1-MCP in EthylBloc using the reduced injection port temperature of 150 deg C revealed a nominal 1-MCP concentration of 0.14% in the EthylBloc formulation. This slightly greater amount of nominal 1-MCP in the EthylBloc formulation (0.14% vs 0.11%) is likely due to less degradation in the injection port at 150 deg C versus 250 deg C. The only difference in the analyses was the injection port temperature. We now believe 0.14% is the accurate nominal concentration of 1-MCP in the EthylBloc formulation; thus the reason for submitting this revised label amendment.

As I indicated in my 03Mar00 label amendment submission, Floralife, who currently manufactures and sells EthylBloc, stopped production last week when we became aware of this lower ai issue. However, Floralife is a small company and needs to resume production as soon as possible or face significant economic hardship.

Anything that the Agency can do to expedite approval of this revised label amendment so that Floralife may resume production of EthylBloc by the end of this week would be greatly appreciated.

Please contact me by phone (215-592-3581), fax (215-592-3414), or E-mail (rstysl@rohmmaas.com) if you have any questions about this label amendment.

Sincerely,



Stephen L. Longacre, Ph.D.  
Product Registration Manager  
Agricultural Chemicals Registration  
and Regulatory Affairs Department

...

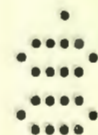
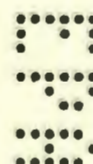
...

...

...

Administrative materials submitted with this letter:

- 1) EPA Form 8570-1 (OPP Identifier 267630);
  - 2) Revised Product Label for 71297-1 (SLL/08Mar00) (5 copies)
  - 3) Revised Confidential Statement of Formula / Basic Formulation (dated 08Mar00); and
  - 4) Revised Confidential Statement of Formula / Alternate Formulation (dated 08Mar00).
- 



**HAZARD TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION.** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapors. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**STORAGE** Store in original packaging in a cool, dry place.

|                                                |         |
|------------------------------------------------|---------|
| Active Ingredient (1-Methylcyclopropene) ..... | 0.14%   |
| Inert Ingredients .....                        | 99.86%  |
| Total .....                                    | 100.00% |

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

Refer to insert label for additional precautionary statements and directions for use.



MFG. by

The Care and Handling Experts

**Floralife, Inc.**

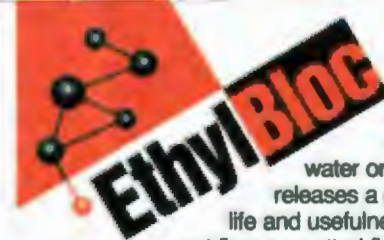
751 Thunderbolt Drive

Wallerboro, SC 29488

800-538-3320

843-538-3839

Made in U.S.A.



**NET CONTENT:**  
100 grams

**STOCK NO.**  
**9200**

**EthylBloc®**

is a powder that,  
when mixed with

water or a buffer solution,

releases a gas to extend the

life and usefulness of many fresh

cut flowers, potted flowering, bedding,

nursery and foliage plants. Crops are treated

with this gas in enclosed areas such as rooms,

coolers, greenhouses, truck trailers and shipping

boxes/containers. This product is not intended for

use only on ornamental, non-food crops Do not use

outdoors or in other non enclosed areas.

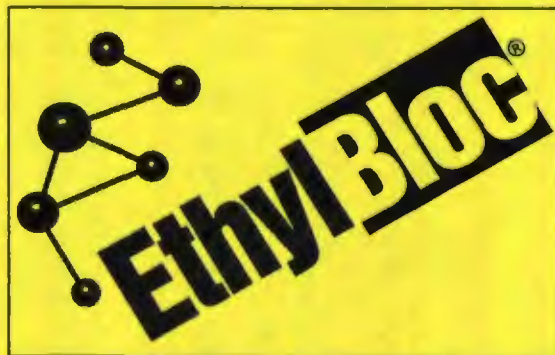


**308**

EPA Registration No. 71297-1

EPA Establishment No. 71297-SC-001





EthylBloc® is a powder that, when mixed with a Mixing/Buffer solution or water, releases a gas to extend the life and usefulness of many fresh cut flowers, potted flowers, bedding, nursery and foliage plants. Plants are treated with this gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. This product is intended for use only on ornamental, non-food crops. Do not use outdoors or in other non-enclosed areas.

**Active Ingredient:** 1-Methylcyclopropene .....00.14%  
**Other Ingredients:** .....99.86%  
**Total:** .....100.00%

**CAUTION      KEEP OUT OF REACH OF CHILDREN**

**Statement of Practical Treatment**

**IF IN EYES:** Flush with plenty of water. Call a physician if irritation persists.  
**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.  
**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

Refer to insert label for additional Precautionary Statements and Directions for Use.

Manufactured by: Floralife, Inc.  
751 Thunderbolt Drive  
Walterboro, SC 29488  
[www.floralife.com](http://www.floralife.com)

For product information, call toll-free (800) 323-3689 or (843) 538-3839

EPA Registration No.: 71297-1  
EPA Establishment No.: 71297-SC-001  
U.S. Patent No. 5,518,988

Net Contents: 38 g (water soluble packet), 75 g (water soluble packet), 100 g bottle.



## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and mixers of this product must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Protective eyewear (goggles or face shield).
- Rubber gloves.
- As a general precaution when exposed to gas, for activities in enclosed areas wear a respirator with either an organic vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- Applicators and handlers must follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store in original packaging in a cool, dry place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

EthylBloc® can extend the life and usefulness of many fresh cut flowers and potted flowers, bedding, nursery and foliage plants. It works by inhibiting the negative effects of ethylene and thus prevents or reduces premature flower death, leaf and/or flower fall, and leaf yellowing.

EthylBloc® is specifically designed to be used by all levels of the floral and nursery industries, including growers, shippers, wholesalers, bouquet manufacturers, mail-order houses and retailers (such as florists, garden centers, nurseries and mass-market outlets). EthylBloc® is very easy to use with almost no labor costs.

EthylBloc® can be used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. It comes with two scoops for easy measuring and the proper Mixing/Buffer Solution. EthylBloc® is in a water soluble package for easy use with the proper Buffer (mixing) solution. The Mixing/Buffer Solution is used to facilitate gas release. Users can substitute tap water for the Mixing/Buffer Solution but the gas release will not be as efficient. Contact the manufacturer for specific directions. EthylBloc® is more effective under warm temperature conditions, 55° to 75°F, (13° to 24°C). Longer treatment times are required for plants held under temperatures below 55°F, (13°C).



## **FLOWERS AND PLANTS**

EthylBloc® treatment benefits many flowers and plants such as:

|                       |                              |                     |               |
|-----------------------|------------------------------|---------------------|---------------|
| Achillea              | Celosia                      | Freesia             | Phlox         |
| Aconitum              | Centaurea                    | Fuchsia             | Physostegia   |
| Agapanthus            | Chamaedorea                  | Geranium            | Polinsettia   |
| Alchemilla            | Chelone                      | Gladiolus           | Radermachera  |
| Allium                | Coleus                       | Godetia             | Rose          |
| Alstroemeria          | Cordylone                    | Gypsophila          | Rudbeckia     |
| Alyssum               | Cymbidium                    | Hibiscus            | Salvia        |
| Aphelandra            | Crocasmia(Montbretia)        | Ilex (Holly)        | Saponaria     |
| Aquilegia             | Daucus (Queen Annes<br>Lace) | Impatiens           | Scabiosa      |
| Asclepias             | Delphinium                   | Ixia                | Silene        |
| Astrantia             | Dendrobium                   | Kalanchoe           | Snapdragon    |
| Asparagus Fern        | Dianthus                     | Kniphofia           | Solidaster    |
| Azalea                | Dicentra                     | Lavatera            | Stock         |
| Begonia               | Dizygotheca                  | Lily                | Streptocarpus |
| Bouvardia             | Doronicum                    | Lysimachia          | Sweet William |
| Brassaia (Schefflera) | Echium                       | Miniature Carnation | Trachelium    |
| Brodiaea (Triteleia)  | Eremurus                     | Monkshood           | Trollius      |
| Calathea              | Eustoma (Lisianthus)         | Pelargonium         | Veronica      |
| Campanula             | Ficus                        | Petunia             | Wax Flower    |
| Carnation             |                              | Philodendron        | Zygocactus    |

To realize maximum benefits, plants should be treated whether or not they may have been previously treated with EthylBloc® or another anti-ethylene product. Shipments already treated with EthylBloc® do not have to be retreated, however, retreating is not harmful and can even be beneficial. Some species that would likely benefit from additional applications include those with more than one flower per stem (i.e., snapdragons, delphiniums, miniature carnations and alstroemeria) and flowers at different stages of development on the same plant (i.e., geraniums, impatiens, and azaleas).

## **TREATMENT INSTRUCTIONS**

1. Calculate the treatment volume by measuring the length, width and height of the treatment area in feet or meters. Multiply these three numbers together to obtain the volume of the room/area in cubic feet or cubic meters. For example, if a room is 4 feet wide, 5 feet long and 5 feet high, the volume equals 100 cubic feet.
2. Wear all Personal Protective Equipment (PPE) required under Precautionary Statements.
3. Use a plastic mixing container large enough to hold the EthylBloc® and Mixing/Buffer Solution. A plastic pail works well for larger applications, a plastic bowl or similar container for smaller applications.
4. First add Mixing/Buffer Solution to the mixing container. Then add the EthylBloc® powder. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the following tables/boxes. For water soluble packets, first add Mixing/Buffer Solution to the mixing container. Then add the water soluble packet of EthylBloc® to the mixing container, making sure the water soluble packet is covered. The amounts of EthylBloc® and Mixing/Buffer Solution are specified in the following tables/boxes.



5. Following the addition of EthylBloc® to the Mixing/Buffer Solution, leave the treatment area immediately. Make sure the area is sufficiently sealed. See following application sections for details.
6. POSTING: Signs should be posted on all potential entry points during EthylBloc® treatment (for at least four hours or as otherwise recommended in the Directions for Use). Signs should state **"CAUTION! Do not enter area. EthylBloc® treatment underway."** Posting is suggested as a means of ensuring optimal effectiveness of EthylBloc®.
7. After the treatment period ends (see below tables/boxes for specified treatment periods), ventilate treated areas with outside air before re-entry.
8. Remaining treatment solution can be disposed of on site or at an approved waste disposal facility.

## SPECIFIC TREATMENT PERIODS

**TREATMENT CONDITIONS: 55 to 75 F, 4 to 8 hours**

**TREATMENT RATE: 1.5 gram of EthylBloc® plus 1 fl. oz. Mixing Solution per 100 cubic feet**

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 13                  |
| 1 Green Scoop             | 2 Tbsp                         | 100                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 2500                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.4                   |
| 1 Green Scoop             | 30 ml                     | 3                     |
| 38 g Water Soluble Packet | 750 ml                    | 75                    |
| 75 g Water Soluble Packet | 1500 ml                   | 150                   |

**TREATMENT CONDITIONS: 55 to 75 F, minimum 10 hours**

**TREATMENT RATE: 1.5 gram of EthylBloc® plus 1 fl. oz. Mixing Solution per 200 cubic feet**

| Amount of EthylBloc®      | Amount of Mixing Solution      | Cubic Feet to Treat |
|---------------------------|--------------------------------|---------------------|
| 1 White Scoop             | 1 tsp                          | 26                  |
| 1 Green Scoop             | 2 Tbsp                         | 200                 |
| 38 g Water Soluble Packet | 25 fl oz or 3 cups plus 2 Tbsp | 5000                |
| 75 g Water Soluble Packet | 50 fl oz or 6 cups plus 4 Tbsp | 10000               |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 5 ml                      | 0.8                   |
| 1 Green Scoop             | 30 ml                     | 6                     |
| 38 g Water Soluble Packet | 750 ml                    | 150                   |
| 75 g Water Soluble Packet | 1500 ml                   | 300                   |

**TREATMENT CONDITIONS: 35 to 55 F, minimum 10 hours**

**TREATMENT RATE: 1.5 gram of EthylBloc® plus 1 fl. oz. Mixing Solution per 100 cubic feet**

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Feet to Treat |
|---------------------------|---------------------------|---------------------|
| 1 White Scoop             | 1.5 tsp                   | 13                  |
| 1 Green Scoop             | 3 Tbsp                    | 100                 |
| 38 g Water Soluble Packet | 37 fl oz or 4 2/3 cups    | 2500                |
| 75 g Water Soluble Packet | 75 fl oz or 9 1/3 cups    | 5000                |

### METRIC EQUIVALENT

| Amount of EthylBloc®      | Amount of Mixing Solution | Cubic Meters to Treat |
|---------------------------|---------------------------|-----------------------|
| 1 White Scoop             | 7 ml                      | 0.4                   |
| 1 Green Scoop             | 45 ml                     | 3                     |
| 38 g Water Soluble Packet | 1125 ml                   | 75                    |
| 75 g Water Soluble Packet | 2250 ml                   | 150                   |

#### Measurements:

WHITE SCOOP = 0.2 grams EthylBloc® powder

GREEN SCOOP = 1.5 grams EthylBloc® powder

1 teaspoon = 1 tsp = 5 ml

1 Tablespoon = 1 Tbsp = 3 tsp = 1/2 fl oz

1 fl oz = 2 Tbsp. = 30 ml

1 cup = 8 fl oz = 240 ml

38 gram Water Soluble Packet will treat a 20 ft truck container

75 gram Water Soluble Packet will treat a 40 ft truck container



### **APPLICATION IN GREENHOUSES PRIOR TO HARVEST**

Fresh cut flowers and bedding, potted flowering, nursery and foliage plants can be treated in the greenhouse just prior to being harvested.

1. The greenhouse must be tightly constructed. Plastic covered houses (especially "double-poly") are generally tighter than fiberglass or glass covered ones.
2. Sections of greenhouses can be enclosed with plastic to make the treatment area smaller, as long as it is sealed sufficiently to prevent the gas from escaping. Excessive leakage reduces effectiveness of EthylBloc®.
3. Make sure all greenhouse vents are closed. Night treatment is recommended mainly because vent closing is more realistic and treatment times can be longer.
4. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
5. All greenhouse treatments should be done at temperatures greater than 55° F (13°C).
6. When calculating treatment volumes, use ½ of the height measured at the ridge/peak for the height measurement. If a greenhouse is 25 feet wide, 100 feet long and 10 feet high, the approximate volume equals  $25 \times 100 \times 10/2 = 12,500$  cubic feet.
7. Follow steps under Treatment Instructions.

### **APPLICATION IN ENCLOSED AREAS SUCH AS: HOLDING/STORAGE ROOMS, COOLERS, AND TRUCK TRAILERS**

Plants being held in enclosed areas can be easily treated with EthylBloc®. For example, non-boxed sleeved potted plants and cut flowers (held dry or in solution), or boxed plants and cut flowers with the lids and/or pre-cooling vents completely open and directly exposed to the surrounding atmosphere can be treated. Bedding or potted plants on movable racks are also easily treated.

#### **Typical treatment areas**

- Retail and wholesale florist coolers including walk-in, storage and/or walk-in/storage combinations;
- Delivery trucks or vans, truck trailers, inter-modal containers, regardless of their size/volume;
- Any room in a building that can be isolated, sealed and aerated/vented to the outside after treatment.

1. Treatment areas should be checked for gas leakage. Excessive leakage reduces effectiveness of EthylBloc®.
2. If needed, use plastic liners, tape and/or other products and procedures to make enclosed areas more gas/air tight.
3. Any internal air circulation system (that does not bring in outside air) should remain on during treatment to help distribute the gas.
4. Temperatures should be between 35° and 75° F (1.6° and 24° C).
5. Follow steps under Treatment Instructions.



### **APPLICATION IN AREAS SPECIFICALLY BUILT FOR ETHYLBLOC® TREATMENT**

General EthylBloc® Treatment Chamber. It might be appropriate to construct an area to be used solely for EthylBloc® treatment. Constructing such specific EthylBloc® treatment areas has proven to be an effective way of using EthylBloc®. This maximizes EthylBloc® effectiveness and reduces costs by requiring less product to treat a given number of plant units.

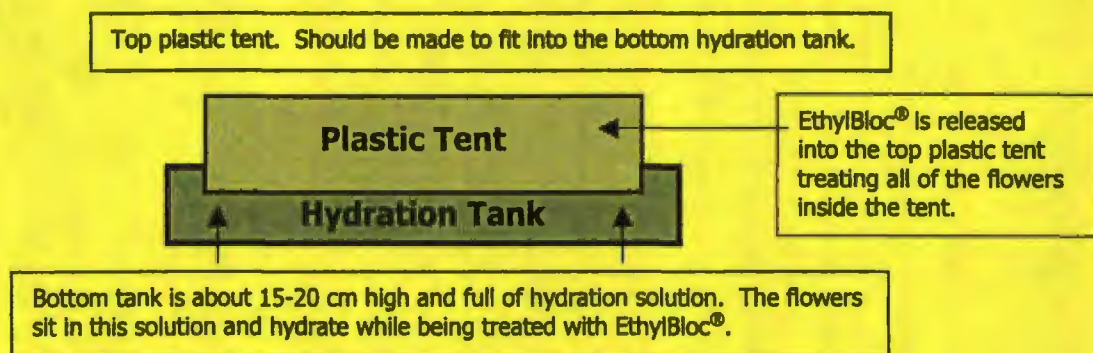
While this treatment area could be built using a number of gas impermeable materials, 4.0 to 6.0 mil polyethylene sheeting works well. Just make sure the units seals properly.

One way to help ensure a good seal where the plastic comes in contact with the flooring is to use hydration solution. The treatment unit base is submerged in a trough of hydration solution a few inches deep, thus making a good seal where gas cannot escape.

To use such a treatment area, follow the treatment instructions adjusting for treatment volume and temperatures.

**Cut Flower Hydration EthylBloc® Treatment Chamber.** The top of the chamber can be made of 4.0 to 6.0 mil polyethylene sheeting and a wooden frame, or a single plastic piece that can fit into the bottom hydration tank, or something similar. The bottom tank can be any size tub that is capable of holding hydration solution and flowers. See drawing below.

**Figure 1**



Place the flowers in bunches or in buckets in the bottom tank. Place the top plastic tent over the bottom holding tank. The tent's bottom edges must be able to be submerged into the hydration solution in the bottom holding tank to insure a seal. Follow Treatment Instructions making sure the EthylBloc® mixture remains separate from the hydration solution throughout the treatment.

**WARRANTY.** BioTechnologies for Horticulture, Inc. warrants that this material conforms to the chemical description on the label. BioTechnologies for Horticulture, Inc. neither makes nor authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, express or implied, concerning this material. The maximum liability for breach of this warranty shall not exceed the purchase price of this product. BioTechnologies for Horticulture, Inc.'s maximum liability for breach of this warranty shall not exceed the purchase price of the product. Buyer and user acknowledge and assume all risks and liabilities resulting from the handling, storage and use of this material, whether or not in accordance with directions.

**Questions? Contact Florallife, Inc.  
Toll-free (800) 538-3320 or call (843) 538-3839.**





United States  
Environmental Protection Agency  
Office of Pesticide Programs (7505C)  
Washington, DC 20460

246808

## Notice of Supplemental Distribution of a Registered Pesticide Product

## Instructions

After a registrant has obtained final registration for the basic product, the registrant may then supplementally distribute his/her product. One form must be submitted for each distributor product and must be signed by the distributor involved. The basic registration number and the distributor company number must be shown.

If a registrant has a potential distributor who does not have a company number assigned, she/he should have the distributor apply, on letterhead stationery, to the Registration Division to have a number assigned prior to submitting this form to the agency.

This Notice of Supplemental Distribution must be submitted by the basic registrant. The completed form must have the concurrence and signature of both the registrant and the distributor.

EPA Registration Number of Product

671297-18

Distributor Company Number

632258

Note: Do not submit distributor product labels

Name of Registered Product (basic product name accepted by EPA)

EthylBloc (R)

Distributor Product Name

EthylBloc (R)

Name and Address of Distributor (Type; include ZIP code)

Floralife, Inc.

751 Thunderbolt Dr.

Walterboro, S.C. 29488

## Read All Conditions Before Signing

1. The distributor product must have the same composition as the basic product.
2. The distributor product must be manufactured and packaged by the same person who manufactures and packages the registered basic product.
3. The labeling for the distributor product must bear the same claims as the basic product, provided, however, that specific claims may be deleted if by doing so, no other changes to the label are necessary.
4. The product must remain in the manufacturer's unbroken container.
5. The label must bear the EPA registration number of the basic product, followed by a hyphen and the distributor's company number.
6. Distributor product labels must bear the name and address of the distributor qualified by such terms as "packed for...", "distributed by..."; or "sold by..." to show that the name is not that of the manufacturer.
7. All conditions of the basic registration apply equally to distributor products. It is the responsibility of the basic registrant to see that all distributor labeling is kept in compliance with requirements placed on the basic product.

## Distributor

We intend to market our product under the Distributor Product Name specified above, subject to the conditions specified on this Notice.

Signature and Title of Distributor

By: James J. Kwa  
Floralife, Inc.

Date

12/15/99

## Registrant

I agree that the distributor named above may distribute and sell the Distributor Product specified above, subject to the conditions specified on this Notice.

Signature and Title of Registrant

Robert M. Lark  
Biotechnologies for Horticulture

Date

12/15/99



### Paperwork Reduction Act Notice

The annual respondent burden for the Notice of Supplemental Distribution of a Registered Pesticide Product is estimated to average 15 minutes per response, including time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information. Send comments regarding this burden, to Director, Regulatory Information Division, 2137, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460; and to Paperwork Reduction Project (OMB No. 2070-0044), Office of Management and Budget, Washington, DC 20503, Marked "Attention Desk Officer for EPA."

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## PESTICIDE FACT SHEET

Name of Chemical(s):      Methylcyclopropene  
Reason for Issuance:      New Active Ingredient  
Date Issued:                April, 1999  
EPA Publication Number: \_\_\_\_\_

### I. DESCRIPTION OF THE PESTICIDE

Generic Names of the  
Active Ingredient:

1-Methylcyclopropene (MCP)

OPP Chemical Code:

224459

Pesticide Types:

Plant Growth Regulator

U.S. Registrants:

Biotechnologies for Horticulture, Inc.  
751 Thunderbolt Road  
Walterboro, SC 29488

### II. USE SITES, APPLICATION TIMING & TARGET PESTS

Target Pests:

Inhibit the Effect of Ethylene

Use Sites:

MCP is to be used in confined areas to extend the life and usefulness of fresh cut flowers and potted flowering, bedding, nursery and foliage plants. Plants are treated in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. The use is classified as indoor nonfood crops application.

Application Timing:

Applications should be made just prior to harvest, immediately after harvest, prior to shipment, upon arrival from the supplier, and/or just prior to sale. Repeat at weekly intervals.



### **III. SCIENCE FINDINGS**

#### **A. HUMAN HEALTH EFFECTS:**

The information submitted in support of the application for registration of MCP adequately satisfies the requirements set forth in 40 CFR 158.690 (c) for biochemical pesticides for nonfood indoor uses. The overall toxicological risk from human exposure to MCP is considered negligible.

##### **1. Toxicology Assessment**

Adequate mammalian toxicology data are available and support registration of the active ingredient 1-Methylcyclopropene.

##### **a. Acute Toxicity**

The registrant submitted acceptable acute toxicity studies. Based on a lack of mortality observed in albino rats orally dosed with 5000 mg/kg of powdered product, the oral LD<sub>50</sub> was >5000 mg/kg; tox category IV. Based on a lack of mortality observed in albino rabbits dermally dosed with 2000 mg/kg of powdered product, the LD<sub>50</sub> was >2000 mg/kg; tox category III. Based on a lack of mortality observed in albino rats exposed to 165 ppm of MCP gas for 4 hours, the LC<sub>50</sub> was >165 ppm; tox category IV. Ocular instillation of 0.1 ml of powdered product caused mild to moderate eye irritation symptoms (redness, chemosis) which cleared by 72 hours posttreatment; tox category III. Dermal application of 0.5 g of powdered product did not cause any dermal irritation symptoms up to 72 hours postdosing; tox category IV. Based on the data, the test substance is not considered to be a contact sensitizer. No hypersensitivity incidents have been reported.

##### **b. Mutagenicity and Developmental Toxicity**

The registrant submitted acceptable mammalian mutagenicity studies for MCP. Based on the data obtained from the *Salmonella typhimurium* microsome reverse mutation assay, MCP did not induce positive increases in the number of revertants. The data obtained from the mouse lymphoma forward mutation assay showed that MCP did not induce a significant increase in mutant cells relative to controls; no dose-response effects nor cell toxicity effects were observed. Based on the data obtained from the *in vivo* mouse microsomal assay, MCP did not induce increases in micronucleated PCEs (polychromatic erythrocytes) relative to vehicle controls; no bone marrow toxicity [measured as a decrease in PCE:NCE (normochromatic erythrocytes) ratio] was observed for any dose of test substance. Additionally, 4100 person hours of MCP exposure have been experienced by humans without any known MCP-induced health related problems being reported. Based on a lack of statistically significant data obtained from a reverse-mutation assay study a mouse lymphoma forward mutation study assay, and a mouse micronucleus study, MCP is not considered a mutagen. The information submitted in support of the application for registration of MCP adequately satisfies the requirements set forth in 40 CFR 158.690 (c) for biochemical pesticides for nonfood outdoor uses. The overall toxicological risk from human exposure to MCP is considered negligible.



**c. Subchronic Toxicity**

A 90 - day feeding study was not required because of the nonfood use of MCP. Moreover, the 90 - day dermal and inhalation toxicity studies are not required because the proposed use pattern does not result in prolonged exposure at concentrations that are likely to be toxic. The immunotoxicity study (cellular immune response study) was waived based on the minimal potential for exposure and the low toxicity of MCP shown in the studies submitted.

**d. Chronic Exposure and Oncogenicity Assessment**

Chronic exposure studies are conditionally required to support nonfood uses only if the potential for adverse chronic effects are indicated based on 1) the subchronic effect levels established in Tier I subchronic oral, inhalation, or dermal studies, 2) the pesticide use pattern, or 3) the frequency and the level of repeated human exposure that is expected. Oncogenicity studies are required to support non-food uses only if the active ingredient or any of its metabolites, degradation products, or impurities produce in Tier I studies morphologic effects in any organ that potentially could lead to neoplastic changes. The triggers for chronic exposure and oncogenicity studies were not met.

**e. Effects on the Endocrine Systems**

The agency is not requiring information on the endocrine effects of this compound at this time. Congress has allowed 3 years after August 3, 1996, for the Agency to implement a screening program with respect to endocrine effects. However, BPPD has considered, among other relevant factors, available information concerning whether MCP has an effect in humans similar to an effect produced by a naturally occurring estrogen or other endocrine effects. There is no known evidence so far that the active ingredient act as an endocrine disruption in humans. No adverse effects to the endocrine system is known or expected.

**2. Dose Response Assessment**

No toxicological endpoints are identified.

**3. Dietary Exposure and Risk Characterization**

Dietary exposure is unlikely to occur because of the nonfood use of MCP. In the absence of any toxicological endpoints, risk from the consumption of residues is not expected for the general population including infants and children.

**4. Occupational, Residential, School and Day Care Exposure and Risk Characterization**

Human exposure to MCP is not expected in these areas.



**a. Occupational Exposure**

Based on its low toxicity and its use on ornamentals intended for aesthetic purposes, MCP is not subject to the Worker Protection Standards (WPS). Moreover, the possibility for dermal, eye and inhalation exposure, is mitigated as long as the product is used according to label directions which recommends the use of protective equipment by users, posting signs to keep people out of treated areas, and allowing proper ventilation time before permitting human activity in the treated areas.

**b. Residential, School and Day Care Exposure and Risk Characterization**

No indoor residential, school, or day care uses currently appear on proposed labels.

**5. Drinking Water Exposure**

Exposure to MCP in drinking water is not expected.

**6. Acute and Chronic Dietary Risks for Sensitive Subpopulations Particularly Infants and Children**

There are no food uses associated with the proposed use of the MCP. Therefore, the acute dietary risks should be negligible based on the lack of exposure.

**7. Aggregate Exposure from Multiple Routes Including Dermal, Oral, and Inhalation**

Aggregate exposure would primarily occur in the applicators subpopulations via dermal and inhalation routes. Risks associated with dermal and inhalation aggregate exposure are measured via the acute toxicity studies submitted to support registration. Because the inhalation toxicity studies for MCP showed no toxicity (Toxicity Category IV), the risks anticipated for this route of exposure are considered minimal. Results of the acute dermal study indicated low toxicity (Toxicity Category III), and no significant dermal irritation (Toxicity Category IV). Based on these results, the anticipated risks from dermal exposure are also considered minimal. Therefore, the risks from aggregate exposure via dermal and inhalation exposure are a compilation of two low risk exposure scenarios and are considered negligible.

**8. Cumulative Effects**

MCP is not toxic and therefore there would be no expected cumulative effects from common mechanisms of toxicity.

**9. Risk Characterization**

The Agency has considered MCP in light of the relevant safety factors in FQPA and FIFRA. A determination has been made that no unreasonable adverse effects to the U. S. population in general, and to infants and children in particular, will result from the use of MCP when label instructions are followed.



## **B. ENVIRONMENTAL ASSESSMENT**

### **1. Ecological Effects Hazard Assessment**

The end use product EthylBloc® is intended for use in nonfood enclosed areas. When applied according to the proposed label, no direct exposure of birds, aquatic organisms and non-target insects to MCP is expected to occur. Thus, MCP's potential environmental/ecological effects are likely to be negligible. As a result, non-target organism/ecological effects studies were not required for this particular use of MCP.

### **2. Environmental Fate and Ground Water Data**

The need for environmental fate and groundwater data (Tier II, (40 CFR Section 158.690(d)(2)(vii through xv)) was not triggered because of practically non-toxic results indicated in Tier I studies. Risk to nontarget species is minimal due to the lack of exposure, low toxicity, use pattern, and application methods.

### **3. Ecological Exposure and Risk Characterization**

No potential for exposure exists to nontarget wildlife as a result of MCP's use.

## **C. EFFICACY DATA**

No efficacy data are required, since no public health uses are involved.

## **IV. SUMMARY OF DATA GAPS :**

There are no data gaps for the use of MCP.

## **V. CONTACT PERSON AT EPA**

### **Office location / telephone / e-mail**

**Driss Benmhend**  
Regulatory Action Leader

Biopesticides and Pollution  
Prevention Division (7511C)  
Office of Pesticide Programs  
Environmental Protection Agency  
401 M Street, S.W.  
Washington, DC 20460

9th Floor (W9), Crystal Mall II  
1921 Jefferson Davis Hwy.  
Arlington, VA 22202

(703) 308-9525  
Benmhend.driss@epamail.epa.gov

**DISCLAIMER:** The information in this Pesticide Fact Sheet is a summary only and is not to be used to satisfy data requirements for pesticide registration and reregistration. Contact the Regulatory Action Leader listed above for further information.



**REGISTRATION ELIGIBILITY DOCUMENT**

**Methylcyclopropene**  
**(PC Code 224459)**

**U.S. Environmental Protection Agency**  
**Office of Pesticide Programs**  
**Biopesticides and Pollution Prevention Division**  
**Methylcyclopropene**  
**(PC Code 224459)**

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## **I. Executive Summary**

### **A. IDENTITY**

Under normal environmental conditions, the active ingredient methylcyclopropene is a gas. The end-use product EthylBloc® is a white powder. It contains 0.43% of 1- methylcyclopropene (hereafter referred to as methylcyclopropene and abbreviated as MCP). When EthylBloc® is mixed with water or a buffer solution, it releases the gas MCP. The end-use product is manufactured by an integrated process. The product chemistry data submitted by the registrant satisfies the requirement for product identity.

### **B. USE/USAGE**

MCP is to be used in confined areas to extend the life and usefulness of fresh cut flowers and potted flowering, bedding, nursery and foliage plants by inhibiting the negative effects of ethylene. Plants are treated in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. The use is classified as indoor non-food crops application.

### **C. RISK ASSESSMENT**

No unreasonable adverse effects are anticipated from aggregate exposure to MCP. This includes all anticipated exposures for which there is reliable information.

#### **1. Human Health Risk Assessment**

##### **a. Toxicological Endpoints**

No toxicological endpoints were identified. Mammalian toxicology data requirements have been submitted and adequately satisfy data requirements to support the registration. Submitted data indicate Toxicity Category IV for acute oral and acute inhalation toxicity. Acute dermal toxicity data indicated a Toxicity Category III. The data reported for primary eye irritation and dermal irritation studies showed that the test substance was minimally irritating, and was given a Toxicity Category III for eye irritation and Toxicity IV for dermal irritation. Moreover, the mammalian mutagenicity studies submitted, demonstrated that MCP was not a mutagenic agent.

##### **b. Human Exposure**

Human exposure would be very low because of the absence of human activity in the enclosed and fairly gas tight areas where MCP is used. Moreover, the label's mitigating language and the quick dissipation of MCP following its application reduce further the chances of human exposure.



**c. Risk Assessment**

BPPD has not identified any subchronic, chronic, immune, endocrine, or nondietary exposure issues as they may affect children and the general U.S. population. Risk to applicators is mitigated as long as the product being registered at this time is used according to label directions. No toxicological endpoints have been identified, and there is limited exposure to this product when used according to label instructions. The Agency has considered MCP in light of the relevant safety factors in the Food Quality Protection Act (FQPA) of 1996 and under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and has determined that there will be no unreasonable adverse effects from the use of this product.

**2. Ecological Risk Assessment**

**a. Ecological Toxicity Endpoints**

No toxic endpoints were identified.

**b. Ecological Exposure**

Information regarding nontarget organisms was waived based of the minimal exposure to MCP. The enclosed areas treated which originally have a minimal nontarget organisms activity (i.e. greenhouses), are fairly gas tight to reduce leakage. As a result, exposure outside the treated areas can also be considered minimal.

**c. Risk Assessment**

Risk to nontarget organisms is expected to be minimal, due to the low chances of exposure to MCP. As a result, BPPD believes that the use of MCP according to label use directions, should result in no significant adverse effects to wildlife.

**D. DATA GAPS / LABELING RESTRICTIONS**

There are no data gaps.

**I. Overview**

**A. ACTIVE INGREDIENT OVERVIEW**

**Common Name:** EthylBloc®

**Chemical Name:** 1-Methylcyclopropene

**Chemical Formula:** C<sub>10</sub>H<sub>18</sub>O

**Chemical Family:** Methylcyclopropene

**Trade and Other Names:** MCP

**CAS Registry Number:** 3100-04-7

**OPP Chemical Code:** 224459

**Basic Manufacturer:** Made onsite  
Biotechnologies for Horticulture, Inc.  
751 Thunderbolt Road  
Walterboro, SC 29488

**B. USE PROFILE**

The following, is information on the proposed uses with an overview of use sites and application methods.

**Type of Pesticide:** Plant Growth Regulator

**Use Sites:** Enclosed indoor use on fresh cut flowers and potted flowering, bedding, nursery and foliage plants. Plants are treated in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers.

**Target:** Inhibit the effect of Ethylene

**Formulation Types:** Powder



**Method and Rates of Application:** To release the active ingredient (MCP), the end-use product EthylBolc® is mixed with water or buffer solution. The mixing container should be made of plastic. The amount of buffer solution and duration of the treatment (exposure time to MCP) vary with the temperature of the area treated:

**a- At a temperature of at least 55°F,** 1 scoop (1.5 grams) of EthylBolc® is to be mixed with 1 ounce of the buffer solution in order to treat a space of 100 cubic feet. The treatment time should be between 4 to 8 hours. At this dosage, a rate of 900 part per billion (ppb) of MCP will be released. If a longer treatment time (12 to 16 hours) is needed, the same dosage of EthylBolc® (1.5 grams in 1 ounce of the buffer solution) can be used to treat an enclosed area of 200 cubic feet. In this case, MCP release will be at a level of 450 ppb.

**b- At temperatures between 35° and 55°F,** 1 scoop of EthylBolc® is to be mixed in 1.5 ounce of the buffer solution, and used to treat an enclosed space of 100 cubic feet. The amount of MCP released will be at 900 ppb. A minimum treatment time of 10 hours is required under these conditions.

**Use Practice Limitations:** For use only on ornamental non-food crops in enclosed areas.

**Timing:** Application should be made just prior to harvest, immediately after harvest, prior to shipment, upon arrival from the supplier, and/or just prior to sale. Repeat at weekly intervals.

#### **C. ESTIMATED USAGE**

None used yet since this will be the first registered product.

#### **D. DATA REQUIREMENTS**

The mammalian toxicology and ecological effects data requirements for MCP have been fulfilled. Product analysis data requirements are adequately satisfied. The data requirements for granting this registration under Section 3(c)(5) of FIFRA have been reviewed by the Biopesticides and Pollution Prevention Division (BPPD). Based on submitted information, the Agency foresees no unreasonable adverse effects to human health and the environment from the use of this chemical and recommends an unconditional registration of this new active ingredient for the proposed uses.

#### **E. REGULATORY HISTORY**

On September 27, 1997, the Agency received an application from Biotechnologies for Horticulture, Inc. to register EthylBolc® containing 0.43% of 1-methylcyclopropene as a plant growth regulator.

A notice of receipt of the application for registration of 1-methylcyclopropene as a new active ingredient was published in the Federal Register on March 10, 1999 (64 FR 11868) with a 30-day comment period. No comments were received as a result of this publication.

#### **F. CLASSIFICATION**

The Biochemical Classification Committee determined that the MCP gas has not been shown to occur naturally, and can not be proved to fit the biochemical pesticide definition. However, the low use rates of MCP and its non-persistence and non-toxic mode of action, make this plant growth regulator eligible for a reduced data set similar to that used for biochemical pesticides applied to non-food crops in greenhouses.

#### **G. FOOD CLEARANCES/TOLERANCES**

A numeric tolerance or exemption from the requirement of a tolerance is not needed because there are no food uses associated with the registration of MCP.



### **III. Science Assessment**

#### **A. PHYSICAL/CHEMICAL PROPERTIES ASSESSMENT**

All product chemistry data requirements for MCP are satisfied.

##### **1. Product Identity and Mode of Action**

###### **a. Product Identity:**

There is no TGA I for MCP. The end-use product has to be mixed with water or a buffer solution in order to release the active ingredient (gas) MCP which has the chemical formula  $C_{10}H_{18}O$ . The end-use product EthylBloc® which is a white powder, contains 0.43% of MCP, and is manufactured by an integrated process. The product chemistry data submitted by the registrant satisfies the requirement for product identity.

###### **b. Mode of Action:**

MCP which is considered a plant growth regulator, has a non-toxic mode of action. It acts as an inhibitor of ethylene by blocking the attachment of ethylene to plant and flower tissue, and thus prolongs the life of cut flowers and plants.

##### **2. Food Clearances/Tolerances**

There are no food uses associated with this action. As a result, a tolerance establishment/exemption is not an issue in this case.

##### **3. Physical And Chemical Properties Assessment**

Since there is no TGA I involved, the physical and chemical characteristics of the end-use product were submitted to support the registration. There are summarized in Table 1.

Table 1. Product chemistry data requirements

| GUIDELINE NO.                 | STUDY                                                                                                 | RESULTS                                                                                                                               | MRID NO.                            |
|-------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 151B-10<br>151B-11<br>151B-12 | Product identity;<br>Manufacturing process;<br>Discussion of formulation of unintentional ingredients | Submitted data satisfies the data requirements for product identity, manufacturing process, and discussion of formation of impurities | 445170-01<br>444647-01<br>445170-02 |
| 151B-13                       | Analysis of samples                                                                                   | Submitted data satisfy the data requirements for analysis of samples                                                                  | 444647-02                           |
| 151B-15                       | Certification of limits                                                                               | Limits listed in the CSF are adequate                                                                                                 | 445170-03                           |
| 151B-16                       | Analytical method                                                                                     | G C / F I D                                                                                                                           | 44647-03                            |
| 151B-17                       | PHYSICAL / CHEMICAL PROPERTIES FOR THE EP                                                             |                                                                                                                                       |                                     |
| 151B-17(a)                    | Color                                                                                                 | White                                                                                                                                 | 445676-01                           |
| 151B-17(b)                    | Physical State                                                                                        | Powder                                                                                                                                | 445676-01                           |
| 151B-17(c)                    | Odor                                                                                                  | Faint, sweet                                                                                                                          | 445676-01                           |
| 151B-17(d)                    | Melting point                                                                                         | >300 °C ; color changes from white to brown at 260 °C.                                                                                | 445676-01                           |
| 151B-17(e)                    | Boiling point                                                                                         | Not Applicable                                                                                                                        |                                     |
| 151B-17(f)                    | Density/Specific gravity                                                                              | 0.634 g/ml at 25 °C                                                                                                                   | 445676-01                           |
| 151B-17(g)                    | Solubility                                                                                            | 152 g/L water                                                                                                                         | 445676-01                           |
| 151B-17(h)                    | Vapor Pressure                                                                                        | NA                                                                                                                                    |                                     |



| GUIDELINE NO. | STUDY                         | RESULTS                                                                        | MRID NO.  |
|---------------|-------------------------------|--------------------------------------------------------------------------------|-----------|
| 151B-17(i)    | pH                            | 3.92 (in a 5.02% aqueous solution                                              | 445676-01 |
| 151B-17(j)    | Stability                     | Stable between 0 and 37 °C, under artificial sunlight, and in aqueous solution | 445676-01 |
| 151B-17(k)    | Flammability                  | Not Specified                                                                  |           |
| 151B-17(l)    | Storage stability             | Not Specified                                                                  |           |
| 151B-17(m)    | Viscosity                     | NA                                                                             |           |
| 151B-17(n)    | Miscibility                   | NA                                                                             |           |
| 151B-17(o)    | Corrosion characteristics     | Not Corrosive                                                                  | 445676-01 |
| 151B-17(p)    | Octanol/water partition coef. | NA                                                                             |           |

## B. HUMAN HEALTH ASSESSMENT

The information submitted in support of the application for registration of EthylBloc® containing 0.43% of MCP adequately satisfies the requirements set forth in 40 CFR 158.690 (c) for biochemical pesticides for non-food indoor uses.

The overall toxicological risk from human exposure to MCP is considered negligible.

### 1. Toxicology Assessment

Adequate mammalian toxicology data are available and support registration of the active ingredient 1-methylcyclopropene.

#### a. Acute Toxicity

The registrant submitted acceptable acute toxicity studies. Based on a lack of mortality observed in albino rats orally dosed with 5000 mg/kg of powdered product EthylBloc®, the oral LD<sub>50</sub> was >5000 mg/kg; tox category IV. Based on a lack of mortality observed in albino rabbits dermally dosed with

2000 mg/kg of powdered product, the LD<sub>50</sub> was >2000 mg/kg; tox category III. Based on a lack of mortality observed in albino rats exposed to 165 ppm of MCP gas for 4 hours, the LC<sub>50</sub> was >165 ppm; tox category IV. Ocular instillation of 0.1 ml of powdered product caused mild to moderate eye irritation symptoms (redness, chemosis) which cleared by 72 hours posttreatment; tox category III. Dermal application of 0.5 g of powdered product did not cause any dermal irritation symptoms up to 72 hours postdosing; tox category IV. Based on the data, the test substance is not considered to be a contact sensitizer. No hypersensitivity incidents have been reported. Additionally, 4100 person hours of MCP exposure have been experienced by humans without any known MCP-induced health related problems being reported.

**b. Mutagenicity and Developmental Toxicity**

The registrant submitted acceptable mammalian and non-mammalian mutagenicity studies for MCP. Based on the data obtained from the *Salmonella typhimurium* microsome reverse mutation assay, MCP did not induce positive increases in the number of revertants. The data obtained from the mouse lymphoma forward mutation assay showed that MCP did not induce a significant increase in mutant cells relative to controls; no dose-response effects nor cell toxicity effects were observed. Based on the data obtained from the *in vivo* mouse microsomal assay, MCP did not induce increases in micronucleated PCEs (polychromatic erythrocytes) relative to vehicle controls; no bone marrow toxicity [measured as a decrease in PCE:NCE (normochromatic erythrocytes) ratio] was observed for any dose of test substance. Based on a lack of statistically significant data obtained from a reverse-mutation assay study a mouse lymphoma forward mutation study assay, and a mouse micronucleus study, MCP is not considered a mutagen.

Mammalian toxicity data for EthylBloc® submitted are summarized in Table 2.

Table 2. Toxicity data requirements

| GUIDELINE NO. | STUDY                             | RESULTS               | MRID NO.  |
|---------------|-----------------------------------|-----------------------|-----------|
| TIER I        |                                   |                       |           |
| 152-10        | Acute oral toxicity in rats       | Toxicity Category IV  | 444647-04 |
| 152-11        | Acute dermal toxicity in rabbits  | Toxicity Category III | 444647-05 |
| 152-12        | Acute inhalation toxicity in rats | Toxicity Category IV  | 444647-06 |



| GUIDELINE NO. | STUDY                                                                                           | RESULTS                                | MRID NO.               |
|---------------|-------------------------------------------------------------------------------------------------|----------------------------------------|------------------------|
| 152-13        | Primary eye irritation in rabbits                                                               | Toxicity Category III                  | 444647-07              |
| 152-14        | Primary dermal irritation in rabbits                                                            | Toxicity Category IV                   | 444647-08              |
| 152-15        | Dermal sensitization in guinea pigs                                                             | Not a sensitizer                       | 445170-05              |
| 152-16        | Hypersensitivity incidents                                                                      | No hypersensitivity incidents observed | 445170-06              |
| 152-17        | Genotoxicity - <i>Salmonella typhimurium</i> gene mutation assay                                | Not mutagenic                          | 444647-09              |
| 152-18        | Cellular immune response                                                                        | Waived                                 |                        |
| 152-19        | Mutagenicity:<br>* Mouse Lymphoma forward mutation<br>* <i>In vivo</i> mouse micronucleus assay | Not mutagenic                          | 444647-10<br>444647-11 |

**c. Subchronic Toxicity**

A 90 - day feeding study was not required because of the non-food use of MCP. Moreover, the 90 - day dermal and inhalation toxicity studies are not required because the proposed use pattern does not result in prolonged exposure at concentrations that are likely to be toxic. The immunotoxicity study (cellular immune response study) was waived based on the minimal potential for exposure and the low toxicity of MCP shown in the studies submitted.

**d. Chronic Exposure and Oncogenicity Assessment**

Chronic exposure studies are conditionally required to support non-food uses only if the potential for adverse chronic effects are indicated based on 1) the subchronic effect levels established in Tier I subchronic oral, inhalation, or dermal studies, 2) the pesticide use pattern, or 3) the frequency and the level of repeated human exposure that is expected. Oncogenicity studies are required to support non-

food uses only if the active ingredient or any of its metabolites, degradation products, or impurities produce in Tier I studies morphologic effects in any organ that potentially could lead to neoplastic changes. The triggers for chronic exposure and oncogenicity studies were not met.

**e. Effects on the Endocrine Systems**

The agency is not requiring information on the endocrine effects of this compound at this time. Congress has allowed 3 years after August 3, 1996, for the Agency to implement a screening program with respect to endocrine effects. However, BPPD has considered, among other relevant factors, available information concerning whether MCP has an effect in humans similar to an effect produced by a naturally occurring estrogen or other endocrine effects. There is no known evidence so far that the active ingredient act as an endocrine disruption in humans. No adverse effects to the endocrine system are known or expected.

**2. Dose Response Assessment**

No toxicological endpoints are identified.

**3. Dietary Exposure and Risk Characterization**

Dietary exposure is unlikely to occur because of the non-food use of MCP. In the absence of any toxicological endpoints, risk from the consumption of residues is not expected for the general population including infants and children.

**4. Occupational, Residential, School and Day Care Exposure and Risk Characterization**

Human exposure to MCP is not expected in these areas.

**a. Occupational Exposure**

Based on its low toxicity and its use on ornamentals intended for aesthetic purposes, MCP is not subject to the Worker Protection Standards (WPS). Moreover, the possibility for dermal, eye and inhalation exposure, is mitigated as long as the product is used according to label directions which recommends the use of protective equipment by users, posting signs to keep people out of treated areas, and allowing proper ventilation time before permitting human activity in the treated areas.

**b. Residential, School and Day Care Exposure and Risk Characterization**

No indoor residential, school, or day care uses currently appear on proposed labels.



**5. Drinking Water Exposure**

Exposure to MCP in drinking water is not expected.

**6. Acute and Chronic Dietary Risks for Sensitive Subpopulations Particularly Infants and Children**

There are no food uses associated with the proposed use of the MCP. Therefore, the acute dietary risks should be negligible based on the lack of exposure.

**7. Aggregate Exposure from Multiple Routes Including Dermal, Oral, and Inhalation**

Aggregate exposure would primarily occur in the applicators subpopulations via dermal and inhalation routes. Risks associated with dermal and inhalation aggregate exposure are measured via the acute toxicity studies submitted to support registration. Because the inhalation toxicity studies for MCP showed no toxicity (Toxicity Category IV), the risks anticipated for this route of exposure are considered minimal. Results of the acute dermal study indicated low toxicity (Toxicity Category III), and no significant dermal irritation (Toxicity Category IV). Based on these results, the anticipated risks from dermal exposure are also considered minimal. Therefore, the risks from aggregate exposure via dermal and inhalation exposure are a compilation of two low risk exposure scenarios and are considered negligible.

**8. Cumulative Effects**

MCP is not toxic and therefore there would be no expected cumulative effects from common mechanisms of toxicity.

**9. Risk Characterization**

The Agency has considered MCP in light of the relevant safety factors in FQPA and FIFRA. A determination has been made that no unreasonable adverse effects to the U. S. population in general, and to infants and children in particular, will result from the use of MCP when label instructions are followed.

**C. ENVIRONMENTAL ASSESSMENT**

**1. Ecological Effects Hazard Assessment**

The end use product EthylBloc® is intended for use in non-food enclosed areas. When applied according to the proposed label, no direct exposure of birds, aquatic organisms and non-target insects

to MCP is expected to occur. Thus, MCP's potential environmental/ecological effects are likely to be negligible. As a result, non-target organism/ecological effects studies were not required for this particular use of MCP.

## **2. Environmental Fate and Ground Water Data**

The need for environmental fate and groundwater data (Tier II, (40 CFR Section 158.690(d)(2)(vii through xv)) was not triggered because of practically non-toxic results indicated in Tier I studies. Risk to nontarget species is minimal due to the lack of exposure, low toxicity, use pattern, and application methods.

## **3. Ecological Exposure and Risk Characterization**

No potential for exposure exists to nontarget wildlife as a result of MCP's use.

## **D. EFFICACY DATA**

No efficacy data are required, since no public health uses are involved.



#### **IV. Risk Management Decision**

##### **A. DETERMINATION OF ELIGIBILITY FOR REGISTRATION**

Section 3(c)(5) of FIFRA provides for the registration of new active ingredients if it is determined that (A) its composition is such as to warrant the proposed claims for it; (B) its labeling and other materials required to be submitted comply with the requirements of FIFRA; (c) it will perform its intended function without unreasonable adverse effects on the environment and (D) when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment.

To satisfy criteria "A" above, MCP is not expected to cause unreasonable adverse effects when used according to label instructions. Criteria "B" is satisfied by the current label and by the data presented in this document. It is believed that this new pesticidal active ingredient will not cause any unreasonable adverse effects, will extend the life and usefulness of ornamentals as claimed satisfying Criteria "C". Criteria "D" is satisfied in that the toxicological properties of this product are less toxic than any other conventional pesticide product currently in use.

Therefore, MCP is eligible for registration. Registered use is listed in Table 4, Appendix A.

##### **B. REGULATORY POSITION**

###### **1. Conditional/Unconditional Registration**

All data requirements are fulfilled and BPPD recommends unconditional registration of MCP.

###### **2. CODEX Harmonization**

There are no Codex harmonization consideration since there is no food use associated with this registration.

###### **3. Nonfood Re/Registrations**

There are no non-food issues at this time. The nonfood uses are listed in Appendix A, Table 4.

###### **4. Risk Mitigation**

Since there are no risk issues, risk mitigation measures are not required at this time.

## **5. Endangered Species Statement**

Currently, the Agency is developing a program (The Endangered Species Protection Program) to identify all pesticides whose use may cause potential adverse impacts on endangered and threatened species and their habitats. To aid in the identification of threatened and endangered species and their habitats, several companies have formed an Endangered Species Task Force (EST) under the direction of the American Crop Protection Association (ACPA). Moreover, the EST will assist in providing species location information at the subcounty level, and particularly if an endangered species occurs in areas where pesticides would be used. This information will be useful once the Endangered Species Protection Program has been implemented.

Prior to the implementation of the Endangered Species Protection Program, the Agency will not impose specific labeling on those pesticides that may pose risks to threatened and endangered species and their habitats but will defer imposing specific labeling language until implementation of the Program.

## **C. LABELING RATIONALE**

It is the Agency's position that the labeling for EthylBloc® containing 0.43% of 1-methylcyclopropene complies with the current pesticide labeling requirements.

### **1. Human Health Hazard**

#### **a. Worker Protection Standard**

This product does not come under the provisions of the Worker Protection Standards (WPS).

#### **b. Non-Worker Protection Standard**

There are no non-WPS human health hazard issues.

#### **c. Precautionary Labeling**

The Agency has examined the toxicological data base for MCP product and concluded that the proposed precautionary labeling (i.e. Signal Word, Statement of Practical Treatment and other label statements) adequately mitigates the risks associated with the proposed uses.

**End-Use product Precautionary Labeling:** For EthylBloc®, "CAUTION". Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Harmful if inhaled. Avoid breathing vapor. Remove contaminated clothing and wash clothing before reuse.



**d. Spray Drift Advisory**

No spray drift advisory statement is necessary for this use

**2. Environmental Hazards Labeling**

**End-Use Product Environmental Hazards Labeling:** Because MCP is exclusively intended for indoor use, the environmental hazard statement is not required on the end-use product's label.

**3. Application Rate**

It is the Agency's position that the labeling for the pesticide product containing MCP complies with the current pesticide labeling requirements. The Agency has not stipulated a maximum number of applications for the active ingredient. However, a specified maximum amount of the active ingredient per application is being required as follows:

**At a temperature of at least 55°F**, 1 scoop (1.5 grams) of EthylBoloc® is to be mixed with 1 ounce of the buffer solution in order to treat a space of 100 cubic feet. The treatment time should be between 4 to 8 hours. At this dosage, a rate of 900 part per billion (ppb) of MCP will be released. If a longer treatment time (12 to 16 hours) is needed, the same dosage of EthylBoloc® (1.5 grams in 1 ounce of the buffer solution) can be used to treat an enclosed area of 200 cubic feet. In this case, MCP release will be a level of 450 ppb.

**At temperatures between 35° and 55°F**, 1 scoop of EthylBoloc® is to be mixed in 1.5 ounce of the buffer solution, and used to treat an enclosed space of 100 cubic feet. The amount of MCP released will be at 900 ppb. A minimum treatment time of 10 hours is required under these conditions.

**D. LABELING**

(1) Product name: **EthylBloc®**

Active Ingredient:

1-methylcyclopropene..... 0.43%  
Other Ingredients ..... 99.57%

---

Total ..... 100.00%

Signal word is "CAUTION". Eye irritation warning is appropriate.

The product shall contain the following information:

- Product Name
- Ingredient Statement
- Registration Number
- "Keep Out of Reach of Children"
- Signal Word (CAUTION)



**V. Actions Required by Registrants**

Reports of incidences of adverse effects to humans or domestic animals under FIFRA, Section 6(a)2 and incidents of hypersensitivity under 40 CFR Part 158.690(c), guideline reference number 152-16. There are no data requirements, label changes and other responses necessary for the reregistration of the end-use product since the product is being registered after November 1984 and is, therefore, not subject to reregistration. There are also no existing stocks provisions at this time.

## vi. Appendix A

Table 4 lists the use sites for the product. The label for the product is also attached.

Table 4. Indoor Non-food Use Site Registration/Reregistration

|                                                                                                                              |                           |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>EthylBloc®</b><br><br><u>Use Sites</u><br>Fresh cut flowers and potted flowering, bedding,<br>nursery and foliage plants. | Official date registered: |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------|





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAR -1 1999

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM

**SUBJECT:** Registration of EthylBloc™ (EPA Symbol. No. 071297-R) containing 0.43% 1-Methylcyclopropene (Chemical No. 224459), a new active ingredient. Review of Product Chemistry Data (Submission No. S555763; Case No. 063215), MRID No. 44735401; DP Barcode D253250.

**FROM:** Russell S. Jones, Ph.D., Biologist  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

**THRU:** Freshteh Toghrol, Ph.D., Senior Scientist  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

**TO:** Driss Benmhend, Regulatory Action Leader  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

ACTION REQUESTED

In response to a BPB request for additional information (Memorandum from R. S. Jones to D. Benmhend, dated 12/23/98), BioTechnologies for Horticulture, Inc. has submitted additional product chemistry data in support of the registration of EthylBloc™ (EPA Symbol. No. 071297-R) containing 0.43% 1-Methylcyclopropene (MCP) as its active ingredient; MCP is a new active ingredient. EthylBloc™ is a powdered product that changes to a gas phase (MCP) when mixed with water or a buffering agent. It is intended for non-food use floral and nursery crops.

The submitted product chemistry data includes a clarification of the manufacturing process and the suppliers of the product ingredients, revised certified limits for the basic formulation, revised Confidential Statements of Formula (CSFs) for the basic and alternate formulations (each dated 1/1/99), and a revised label.

## CONCLUSIONS AND RECOMMENDATIONS

1. The supplemental information submitted to clarify the alternate formulations manufacturing process (151-11) is acceptable for registration. No additional data are required.
2. The revised CSF for the basic formulation is acceptable; no additional data are required.
3. The revised CSF for the alternate formulation is acceptable; no additional data are required.
4. The revised first aid and precautionary statements on the product label are satisfactory.

## STUDY SUMMARIES

### Product Chemistry

Supplemental product chemistry data were submitted for the manufacturing process (151-11) and certified limits (151-15). Statements regarding "equivalent" (but unspecified) beginning materials have been removed from the description of the manufacturing process. The manufacturing process for the alternate formulation was clarified and was found to be acceptable. Satisfactory certified limits (including an explanation of how the certified limits were determined for the inerts) for both the basic and alternate formulations were also reported, and revised CSFs for the basic and alternate formulations were submitted.

Classification: Acceptable. No additional data are required.

cc: R. Sjoblad, R. S. Jones, D. Benmhend, BPPD Subject File  
R. S. Jones: F.T. CM2, (703) 308-5071: 2/24/99



**CONFIDENTIAL APPENDIX**

**The Following Section Contains Confidential Business Information (CBI)**

## DATA EVALUATION REPORT

Primary Reviewer: Russell S. Jones, Ph.D., BPPD  
Secondary Reviewer: Freshteh Toghrol, Ph.D., BPPD

STUDY TYPE: Product Chemistry (Subdivision M Guidelines 151-10 to 151-17)

TOX. CHEM. No.: None

CASE No. 063215

PC CODE: 224459

DP BARCODE: D249432

SUBMISSION No.: S555763

MRID Nos: 44735401

TEST MATERIAL: EthylBloc™

STUDY Nos.: None

SPONSOR: BioTechnologies for Horticulture, Inc., 571 Thunderbolt Road,  
Walterboro, SC 29488.

TESTING FACILITIES: None

TITLE OF REPORTS: Manufacturing Process and Certified Limits for EthylBloc® -  
Supplemental Data.

AUTHORS: Amy Plato Roberts, Technology Sciences Group, Inc., 1101 17th  
Street, N.W., Suite 500, Washington, DC 20036.

REPORT ISSUED: January 13, 1999

QUALITY ASSURANCE: The study was not conducted under Good Laboratory Practices  
(GLP) guidelines because the studies were discussions and or  
summaries that contained no scientific data. Statements of non-  
compliance were signed by the study author.

CLASSIFICATION: Acceptable. No additional data are required.



I. MANUFACTURING PROCESS (151-11; MRID 44735401)

The manufacturing process was described in detail in a previous review (see Memorandum from R. S. Jones to D. Benmhend, dated 12/23/98). The registrant submitted a brief clarification of the alternate formulation manufacturing process and clarified why [REDACTED] was used to formulate the end-use product. It was further explained how variations in the amount of [REDACTED] used in the manufacture of the product could cause relatively large range in the certified limits for these two inert ingredients.

[REDACTED]

II. CERTIFICATION OF INGREDIENTS (151-15) MRID 44517003

The revised nominal concentrations and certified ingredient limits (by % weight) for the basic formulation were as follows:

| Ingredient           | Nominal Concentration* | Certified Limits (% by weight)* |       |
|----------------------|------------------------|---------------------------------|-------|
|                      | % by weight            | Upper                           | Lower |
| 1-Methylcyclopropene | 0.430                  | 0.47                            | 0.39  |
| [REDACTED]           |                        |                                 |       |

\*CSF dated 1/13/99

The limits for the inert ingredient were changed from the original submission to show that the upper limit would not exceed 100% of the product by weight.

The nominal concentrations and certified ingredient limits (by % weight) for the alternate formulation were as follows:

| Ingredient           | Nominal Concentration* | Certified Limits (% by weight)* |       |
|----------------------|------------------------|---------------------------------|-------|
|                      | % by weight            | Upper                           | Lower |
| 1-Methylcyclopropene | 0.430                  | 0.47                            | 0.39  |
|                      |                        |                                 |       |

\*CSF dated 11/97

An explanation for the wide variation in the certified limits for the inerts is contained in the description of the manufacturing process (151-11) above.

#### STUDY DEFICIENCIES

None

#### CLASSIFICATION:

Acceptable; no additional data are required.



JAN 22 1999

U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs

BIOTECHNOLOGIES FOR HORTICULTURE, INC.  
751 THUNDERBOLT ROAD  
WALTERSBORO, SC 29488

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 01/19/99. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.



WASHINGTON

1101 17th Street, N.W.  
Suite 500  
Washington D.C. 20036  
Telephone 202 223-4392  
Fax 202 872-0745

Roy Sjoblad - PM 91  
Driss Benmhend  
Biochemical Pesticides Branch  
Biopesticides and Pollution Prevention Division (7511C)  
Office of Pesticide Programs  
1921 Jefferson Davis Highway, CM2  
Arlington, VA 22202

January 13, 1999

**RE: Application for registration of EthylBloc®, EPA File Symbol 71297-R  
Response to Agency letter dated January 6, 1999**

SAN FRANCISCO

2700 Steuart Street Tower  
One Market  
San Francisco, CA 94105  
Telephone 415 267-4119  
Fax 415 267-4198

Dear Messrs. Sjoblad and Benmhend:

In response to the Agency's letter dated January 6, 1999, and the Agency's review dated December 23, 1998, on the registration of EthylBloc®, enclosed you will find the following:

- 1) Revised Confidential Statements of Formula for the basic formulation and an alternate formulation;
- 2) One (1) copy of a revised product label with all changes highlighted;
- 3) Two (2) copies of a clean, revised product label;
- 4) Volume 1 of 2 - Transmittal Document;
- 5) Volume 2 of 2 - Manufacturing Process and Certified Limits for EthylBloc® - Supplemental Data.

SACRAMENTO

712 Fifth Street  
Suite A  
Davis, CA 95616  
Telephone 530 757-1298  
Fax 530 757-1299

As you will note in the enclosed documents, we have addressed those data that were determined "unacceptable but upgradeable" by the review. Should you have any questions or comments, please do not hesitate to let me know.

Sincerely,

Amy Plato Roberts  
Regulatory Consultant for BioTechnologies for Horticulture  
Direct dial (202) 828-8964



VOLUME 1 OF 2 OF SUBMISSION

TRANSMITTAL DOCUMENT

NAME AND ADDRESS OF SUBMITTER:

BioTechnologies for Horticulture, Inc.  
751 Thunderbolt Road  
Waltersboro, SC 29488

REGULATORY ACTION:

Submission of supplemental data in support of EthylBloc® (EPA File Symbol 71297-R)

TRANSMITTAL DATE:

January 13, 1999

LIST OF SUBMITTED STUDIES:

| MRID<br>NUMBER | VOLUME<br>NUMBER | EPA STUDY TITLE                                                                  | GUIDELINE<br>NUMBER              |
|----------------|------------------|----------------------------------------------------------------------------------|----------------------------------|
|                | 1 of 2           | (Transmittal Document)                                                           |                                  |
| 44735401       | 2 of 2           | Manufacturing Process and Certified Limits<br>For EthylBloc® - Supplemental Data | OPPTS 885.1200<br>OPPTS 885.1500 |

COMPANY NAME:

BioTechnologies for Horticulture, Inc.

COMPANY OFFICIAL:

  
Amy Plato Roberts, Regulatory Agent

COMPANY CONTACT:

Amy Plato Roberts, Regulatory Agent  
Technology Sciences Group, Inc.  
1101 17th Street, N.W.  
Washington, DC 20036  
(202) 828-8964



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

JAN - 6 1999

Amy Plato Roberts  
Technology Sciences Group, Inc.  
1101 17<sup>th</sup> Street, N.W., Suite 500  
Washington, DC 20036

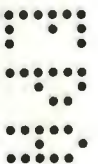
Subject: Application for Registration of EthylBloc® (containing 0.43% of 1-Methylcyclopropene)  
EPA Registration No. 71297-R  
Your Submission of March 18, 1998

Dear Amy:

The data submitted in support of the submission listed above was reviewed. BPPD found several deficiencies in the manufacturing process, and the Confidential Statement of Formula (CSF). These deficiencies are upgradable and have to be addressed before a further consideration is given to your application.

We have attached a copy of the review summary. Please go over it, and make the recommended corrections.

This application will be kept open for a period of 75 days to give you an opportunity to correct the deficiencies listed in the attached review summary. If you find that you need more time to satisfy the requirements, you should request an extension and commit yourself to satisfy the deficiencies within a reasonable period of time. If you do not comply with these procedures, the Agency may administratively withdraw your application from further consideration, and retire this file without further notice to you in accordance with the policy established by the PR Notice 75-4 of August 27, 1975. Once this is done, you will have to submit a complete new



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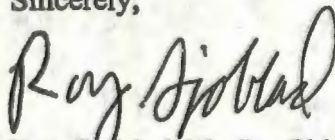
Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 25% Postconsumer)

Rec'd 1/11/99 APR



application should you wish to pursue the registration of you your product after the application has been withdrawn.

Sincerely,



Roy Sjoberg, Ph. D., Chief  
Biochemical Pesticides Branch  
Biopesticides and Pollution Prevention Division  
(7511C)

Enclosures

1

5

9



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

DEC 23 1998

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM

**SUBJECT:** Registration of EthylBloc™ (EPA Symbol. No. 071297-R) containing 0.43% 1-Methylcyclopropene (Chemical No. 224459), a new active ingredient. Review of Product Chemistry and Toxicity Data (Submission No. S548591; Case No. 063215), MRID Nos. 444647-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, and -11; 4451700-01, -02, -03, -04, -05, and -06; and 445676-01 ; DP Barcode D249432.

**FROM:** Russell S. Jones, Ph.D., Biologist  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

**THRU:** Freshteh Toghrol, Ph.D., Senior Scientist  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

**TO:** Driss Benmhend, Regulatory Action Leader  
Biochemical Pesticides Branch  
Biopesticides & Pollution Prevention Division (7511C)

ACTION REQUESTED

BioTechnologies for Horticulture, Inc. requests registration of an end-use product, EthylBloc™ (EPA Symbol. No. 071297-R) containing 0.43% 1-Methylcyclopropene (MCP) as its active ingredient; MCP is a new active ingredient. EthylBloc™ is a powdered product that releases a gas (MCP) when mixed with water or a buffering agent. It is intended for non-food use floral and nursery crops.

In support of the registration, the registrant has submitted product chemistry and toxicity studies, a proposed product label, and Confidential Statements of Formula (CSFs) for the basic formulation and one alternate formulation (each dated 11/97). Material Safety Data Sheets (MSDS) were submitted for each of the product ingredients. The registrant did not submit nontarget organism/ecotoxicity studies or request a waiver from the requirements for these studies.



## CONCLUSIONS AND RECOMMENDATIONS

1. BPB does not support the registration of EthylBloc™ because of deficiencies in the description of the manufacturing process (151-11), and in the certified limits (151-15) and Confidential Statement of Formula (CSF) for the alternate formulation.
2. The data submitted for product identity and disclosure of ingredients (151-10), the discussion of the formation of unintentional ingredients (151-12), preliminary analysis (151-13), analytical methods (151-16), and physical/chemical properties (151-17) are acceptable. No additional data are required.
3. The description of the manufacturing process (151-11) is unacceptable, but upgradable. For each beginning material used in the manufacturing process, the registrant indicated that an "equivalent" material could be substituted, but none of these equivalent materials were identified. To upgrade the study, the registrant must submit a list of all the beginning materials (and substitutes), MSD sheets, and the names and addresses of all their respective suppliers. The registrant must also indicate when each substitute beginning material may be used in the manufacturing process and the amount of each substitute material that is used.
4. The certified limits (151-15) for an inert ingredient in the alternate formulation are unacceptable, but upgradable. To upgrade the data, the registrant must specify the correct upper and lower limits of the substitute inert ingredient; the currently listed limits are too large. The certified limits for this inert ingredient should be  $\pm 3\%$  of the nominal concentration (by % weight). These data must agree with the information listed on a revised alternate formulation CSF.
5. The registrant must submit a revised CSF for the alternate formulation. The alternate formulation CSF should list only the active ingredient and the substitute inert ingredient that is used in place of the inert listed for the basic formulation. The certified limits for the substitute inert ingredient must be  $\pm 3\%$  of the nominal concentration (see above).
6. No additional data are required for acute mammalian toxicity (152-10 to 152-16). The product is not a sensitizing agent.
7. No additional data are required for mutagenicity (152-19). Based on the data, the product is not a mutagen.
8. No data were submitted for non-target organisms/ecological effects (154-6 to 154-11), but none are required for EthylBloc™. The product is non-food use and is not intended for use outdoors or in other non-enclosed areas. If the registrant intends to use this product (or other products containing MCP as the active ingredient) on food crops/commodities, outdoors and/or in other non-enclosed areas, or in enclosed areas



where non-target insects and plants may be exposed, additional non-target organism/ecological effects studies may be required.

9. A revised label must be submitted (see Label Review below).

## **STUDY SUMMARIES**

### **Product Chemistry**

Product chemistry data (Subdivision M Guidelines 151-10 through 151-17 were presented for EthylBloc™ (MRIDs 444647-01, -02, and -03; 4451700-01, -02, -03, and -04; and 445676-01). The end-use product consists of one basic formulation. The new biochemical active ingredient is 1-methylcyclopropene, which comprises 0.43% of the product by weight. The submitted preliminary analysis data were satisfactory. Acceptable certified ingredient limits (by % weight) were reported for the basic formulation, but not for the alternate formulation; the range for the upper and lower certified limits was large. New certified limits for one inert ingredient in the alternate formulation must be submitted and a second inert ingredient must be removed from the ingredients list. A revised alternate formulation CSF must be submitted to reflect these changes. An acceptable GC/FID method for the determination of the active ingredient in the end-use product was presented; precision, accuracy, and limits of detection data were reported, and representative chromatograms were submitted. The data submitted for physical/chemical properties were satisfactory.

Study deficiencies: (i) for each beginning material used in the manufacturing process (151-11), the registrant indicated that an "equivalent" material could be substituted, but none of these equivalent materials were identified; (ii) the range for the certified ingredient limits (151-15) for inert ingredients in the alternate formulation were incorrect; and (iii) an inert ingredient from the basic formulation was incorrectly listed on the alternate formulation CSF.

Classification: Unacceptable, but upgradable. To upgrade the study, the registrant must resolve the product chemistry deficiencies described above.

### **Toxicology**

The registrant submitted acceptable acute toxicity studies (152-10 to 152-16) and mutagenicity studies (152-19) for EthylBloc™. Based on a lack of mortality observed in albino rats orally dosed with 5000 mg/kg of powdered product, the oral LD<sub>50</sub> was >5000 mg/kg; tox category IV. Based on a lack of mortality observed in albino rabbits dermally dosed with 2000 mg/kg of powdered product, the LD<sub>50</sub> was >2000 mg/kg; tox category III. Based on a lack of mortality observed in albino rats exposed to 165 ppm of MCP gas for 4 hours, the LC<sub>50</sub> was >165 ppm; tox category IV. Ocular instillation of 0.1 mL of powdered product caused mild to moderate eye irritation symptoms (redness, chemosis) which cleared by 72 hours posttreatment; tox category



III. Dermal application of 0.5 g of powdered product did not cause any dermal irritation symptoms up to 72 hours postdosing; tox category IV. Based on the data, the test substance is not considered to be a contact sensitizer. No hypersensitivity incidents have been reported. Approximately 4100 person hours of MCP exposure have been experienced by humans without any known MCP-induced health related problems being reported. Based on a lack of statistically significant data obtained from a reverse-mutation assay study a mouse lymphoma forward mutation study assay, and a mouse micronucleus study, MCP is not considered a mutagen.

Classification: Acceptable; no additional data are required.

## **LABEL REVIEW**

General: The signal word "CAUTION" that is listed on the proposed label is appropriate.

Toxicity: Acute toxicity studies demonstrate that the active ingredient should be classified in Toxicity Category III for acute dermal toxicity and primary eye irritation (Subdivision M Guidelines 152-11 and 152-13, respectively). Therefore, the product label must contain a Precautionary Statement and First Aid (Statement of Practical Treatment) statements appropriate for these toxicity categories. Appropriate label statements (obtained from the Label Review System) are attached.

cc: F. Toghrol, R. S. Jones, R. Kumar, BPPD Subject File  
R. S. Jones: F.T. CM2, (703) 308-5071: 12/23/98

**ATTACHMENT**

**Label Precautionary Statements and First Aid (Statement of Practical Treatment)  
Statements**



**CONFIDENTIAL APPENDIX**

**The Following Section Contains Confidential Business Information (CBI)**

Date: 12/09/98

LABEL REVIEW SYSTEM

Page: 1

ID #: 071297-00001 ETHYLBLOC

SIGNAL WORD: CAUTION

PRECAUTIONARY STATEMENTS:

Harmful if absorbed through skin. Causes moderate eye irritation.  
Avoid contact with eyes, skin or clothing. Wash hands before eating,  
drinking, chewing gum, using tobacco or using ~~the toilet.~~  
*bathtub facilities*

STATEMENT OF PRACTICAL TREATMENT (SOPT):

IF ON SKIN: Wash with plenty of soap and water. Get medical attention. For Category III, add "if symptoms persist."

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.





United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

259579

## Application for Pesticide - Section I

|                                                                                                                                                                                                                         |                                                                                                                                                                                          |                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br>71297-R                                                                                                                                                                                    | 2. EPA Product Manager<br>Driss Benmhend (703) 308-9525                                                                                                                                  | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br>EthylBloc                                                                                                                                                                                  | PM#<br>BPPD                                                                                                                                                                              |                                                                                                            |
| 5. Name and Address of Applicant (Include ZIP Code)<br>Biotechnologies for Horticulture, Inc.<br>751 Thunderbolt Road<br>Walterboro, SC 29488<br><br><input checked="" type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br><br>Product Name _____ |                                                                                                            |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Amendment - Explain below.                            | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input checked="" type="checkbox"/> Notification - Explain below.              | <input checked="" type="checkbox"/> Other - Explain below.                             |

RECEIVED

OCT 9 1998

OPP/BPPD

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Revised labels, including application rates in parts per billion (ppb) and paragraph on posting (page 5), per EPA letter dated September 21, 1998. All changes are highlighted.

## Section - III

|                                                                                                                                                                     |                                                                               |                                                                                        |                                                                                                                                                                                          |                                                             |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------|
| 1. Material This Product Will Be Packaged In:                                                                                                                       |                                                                               |                                                                                        |                                                                                                                                                                                          | 2. Type of Container                                        |                   |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No                                                                            | Unit Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | <input type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |                                                             |                   |
| * Certification must be submitted                                                                                                                                   |                                                                               | If "Yes" Unit Packaging wgt.                                                           | No. per container                                                                                                                                                                        | If "Yes" Package wgt.                                       | No. per container |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input type="checkbox"/> Container                                                        |                                                                               | 4. Size(s) Retail Container                                                            |                                                                                                                                                                                          | 5. Location of Label Directions<br><input type="checkbox"/> |                   |
| 6. Manner in Which Label is Affixed to Product<br><input type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                               | <input type="checkbox"/> Other _____                                                   |                                                                                                                                                                                          |                                                             |                   |

## Section - IV

|                                                                                                                                                                                                                                                                             |                                   |                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                               |                                   |                                                     |
| Name<br>Amy Plato Roberts                                                                                                                                                                                                                                                   | Title<br>Regulatory Consultant    | Telephone No. (Include Area Code)<br>(202) 828-8984 |
| Certification<br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |                                   | 6. Date Application Received<br>(Stamped)<br>       |
| 2. Signature<br>                                                                                                                                                                                                                                                            | 3. Title<br>Regulatory Consultant |                                                     |
| 4. Typed Name<br>Amy Plato Roberts                                                                                                                                                                                                                                          | 5. Date<br>October 6, 1998        |                                                     |



**WASHINGTON**

1101 17th Street, N.W.

Suite 500

Washington, D.C. 20036

Telephone 202 223-4392

Fax 202 872-0745

**Roy Sjoblad**  
Chief, Biochemicals Branch  
Biopesticides and Pollution Prevention Division (7511C)  
Office of Pesticide Programs, EPA  
1921 Jefferson Davis Highway  
Arlington, VA 22202

October 13, 1998

**RE: Letter of Authorization to discuss the product EthylBloc® (EPA File Symbol 70299-R) with the Pest Management Regulatory Agency of Canada**

Dear Roy:

**SAN FRANCISCO**

2700 Steuart Street Tower

One Market

San Francisco, CA 94105

Telephone 415 267-4119

Fax 415 267-4198

As discussed during our meeting on September 28, 1998 and during conversations with Driss Benmhend, the Regulatory Action Leader for this product, the Pest Management Regulatory Agency (PMRA) of Canada will be following EPA's registration of EthylBloc® so as to further its experience with registration processes that utilize reduced data sets for biochemical pesticides. As mutually agreed, EPA will be available to discuss the registration or share documents regarding EPA evaluation, as needed. Discussions are expected to be in the spirit of allowing PMRA to understand EPA's system of evaluating biochemical pesticides. Documents may include, but are not limited to, data reviews, EPA correspondence, application forms, labels and study details. The registrant will be responsible for providing PMRA with relevant documents; however, EPA is free to transmit documents if it so wishes.

**SACRAMENTO**

712 Fifth Street

Suite A

Davis, CA 95616

Telephone 530 757-1298

Fax 530 757-1299

With this letter we hereby authorize EPA to discuss matters regarding applications to register EthylBloc® with personnel at PMRA, including discussions regarding confidential business information, and to release written documents to PMRA, including those containing confidential business information.

We appreciate your assistance and participation in this collaboration with PMRA. Should you have any questions or comments please let me know.

Sincerely,

**Amy Plato Roberts**  
Regulatory Consultant for Biotechnologies for Horticulture

cc: Driss Benmhend, BPPD, EPA  
Janet Andersen, BPPD, EPA

Wayne Ormrod, PMRA  
Jim Daly, Biotechnologies for Horticulture

E-mail [tsg@tsgusa.com](mailto:tsg@tsgusa.com)

<http://www.tsgusa.com>





## BioTechnologies for Horticulture, Inc.

Roy Sjoblad  
Chief, Biochemicals Branch  
Biopesticides and Pollution Prevention Division (7511C)  
Office of Pesticide Programs, EPA  
1921 Jefferson Davis Highway  
Arlington, VA 22202

**RE: Technology Sciences Group Letter of Authorization, dated October 13, 1998, giving authorization to discuss the product EthylBloc® (EPA File Symbol 70299-R) with the Pest Management Regulatory Agency of Canada**

Dear Mr. Sjoblad:

As discussed during our meeting on September 28, 1998 and as detailed in a letter of authorization from Technology Sciences Group (TSG) dated October 13, 1998, we are confirming authorization, as given by TSG, for EPA to discuss matters regarding applications to register EthylBloc® with personnel at PMRA, including discussions regarding confidential business information, and to release written documents to PMRA, including those containing confidential business information.

Sincerely,

Jim Dery  
President

cc: Driss Benmhend, BPPD, EPA  
Janet Andersen, BPPD, EPA  
Wayne Ommrod, PMRA  
Amy Roberts, TSG

---

751 Thunderbolt Drive • Walterboro, SC 29488-9366

\*\*\*\*\*  
 NEW CHEMICAL/FIRST FOOD USE SCREEN  
 \*\*\*\*\*

1. FILE SYMBOL/REG NO (ISB) 71297-2
2. TOLERANCE PETITION NO. (RSB) \_\_\_\_\_
3. CHEMICAL NAME (RSB) 1-methylcyclopropene
4. PESTICIDE CHEMICAL CODE (RSB) 22449 (Cas: 3100-04-7)
5. PRODUCT NAME (ISB) Ethylloc
6. PM (ISB) 92 7. PM TEAM REVIEWER (PM) \_\_\_\_\_
8. DATE OF RECEIPT (ISB) 12/11/97 (1/12/98 from RSB)
9. USE PATTERN (PM) \_\_\_\_\_
10. DATE OF TRANSMISSION TO PM (ISB) 1/13/98 (Data to SIG)  
 (EPA Receipt Date plus 3 days)
11. DATE OF TRANSMISSION TO HED/EFED/RSB (PM) \_\_\_\_\_  
 (PM Receipt Date plus 5 days)
12. HED/EFED/RSB DUE DATE FOR COMPLETION OF SCREEN \_\_\_\_\_  
 (HED/EFED Receipt Date plus 10 days)
13. HED/EFED/RSB REVIEWERS:  
 HED: TB \_\_\_\_\_ EFED: EEB \_\_\_\_\_  
 DEB \_\_\_\_\_ EFGWB \_\_\_\_\_  
 OREB \_\_\_\_\_  
 RD/RSB \_\_\_\_\_
14. HED/EFED/RSB COMPLETION DATE (HED) \_\_\_\_\_ (EFED) \_\_\_\_\_ (RSB) \_\_\_\_\_
15. SUBMISSION BARCODE (PM) \_\_\_\_\_

R.H.  
 9/3/98

JUK 9/3/98

|                                           |       |
|-------------------------------------------|-------|
| REGISTRANT PHONE CONTACT INFORMATION (PM) |       |
| DATE OF CONTACT                           | _____ |
| PERSON CONTACTED                          | _____ |
| TITLE                                     | _____ |
| DECISION & COMMENTS                       | _____ |
|                                           |       |
|                                           |       |

|                                     |                                           |
|-------------------------------------|-------------------------------------------|
| STATUS OF PACKAGE                   |                                           |
| <input checked="" type="checkbox"/> | PASSED SCREEN                             |
| <input type="checkbox"/>            | FAILED SCREEN<br>(Documentation attached) |



\*\*\*\*\*  
NEW CHEMICAL/FIRST FOOD USE SCREEN  
\*\*\*\*\*

1. FILE SYMBOL/REG NO. (ISB) 71297-R
2. TOLERANCE PETITION NO. (RSB) \_\_\_\_\_
3. CHEMICAL NAME (RSB) 1-Methylcyclopropene
4. PESTICIDE CHEMICAL CODE (RSB) 224459 (CAS: 3100-04-7)
5. PRODUCT NAME (ISB) ETHYBLOC
6. PM (ISB) 92 7. PM TEAM REVIEWER (PM) \_\_\_\_\_
8. DATE OF RECEIPT (ISB) 12/11/97 (1/12/98 From RSB)
9. USE PATTERN (PM) \_\_\_\_\_
10. DATE OF TRANSMISSION TO PM (ISB) 1/13/98 (Data to SIG)  
(EPA Receipt Date plus 3 days)
11. DATE OF TRANSMISSION TO HED/EFED/RSB (PM) \_\_\_\_\_  
(PM Receipt Date plus 5 days)
12. HED/EFED/RSB DUE DATE FOR COMPLETION OF SCREEN \_\_\_\_\_  
(HED/EFED Receipt Date plus 10 days)
13. HED/EFED/RSB REVIEWERS:
- |              |             |
|--------------|-------------|
| HED:         | EFED:       |
| TB _____     | KEB _____   |
| DEB _____    | EFGWB _____ |
| OREB _____   |             |
| RD/RSB _____ |             |
14. HED/EFED/RSB COMPLETION DATE (HED) \_\_\_\_\_ (EFED) \_\_\_\_\_ (RSB) \_\_\_\_\_
15. SUBMISSION BARCODE (PM) \_\_\_\_\_

REGISTRANT PHONE CONTACT INFORMATION (PM)

DATE OF CONTACT \_\_\_\_\_

PERSON CONTACTED \_\_\_\_\_

TITLE \_\_\_\_\_

DECISION & COMMENTS \_\_\_\_\_

STATUS OF PACKAGE

☐ PASSED  
SCREEN

☒ FAILED  
SCREEN  
(Documentation  
attached)

R.D. 4-23

R.D. 4/23/98 367 4/23/98



# ACCELERATED REGISTRATION COMMITTEE

## Registration Priority Actions

DATE: 9/13/98  
Presenting RAL: Driss Benmhend

MEMBERS ATTENDING: Gail Tomimatsu, Rodger Gardner, Freshteh Toghrul, Roy Sjoblad, Rita Kumar, Susanne Cerrelli, Judy Loranger, John Kaugh

| ACTION(S):                                                                                                           | REGISTRANT                                                                                            | ISSUES:                                                                                                                                                                                                                                                    | DECISIONS:                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| New Chemical Registration.<br>A.I.:<br>Methylcyclopropene (MCP) Ethyl Bloc<br>Chem. Code: 224459<br>EPA Rer. 71297-R | BioTechnologies for Horticulture<br>A PAR, used to extend life of cut flowers. Indoor greenhouse use. | Screening of a new chemical powder, mixed w/ water, used to preserve cut flowers. Had failed to new chemical screen once before. Last time we had asked for a subchronic inhalation study. Registrant has requested waiver of subchronic inhalation study. | For food use they will have to submit an inhalation subchronic study. <del>This</del> John & Roger: Gas is methylcyclopropene the starting material is [redacted] Roger: Protocol for mutagenicity in which assay is inappropriate, since the gas evaporates & there is no exposure. Need to do something about characterizing exposure for occupational risk. |

How much gas per gram of material?

Exposure scenario should show with a reasonable certainty that there is very little exposure ( $< 165$  ppm in air).

John: The gas is encapsulated in the casing which is released when comes in contact w/ water.

Roger: The application rate should be translated to ppm so we can compare it to the LC50, & use it to waive other (subchronic) studies.

Outcome: — Passes chemistry screen. [redacted] is mentioned as an inert w/ no tox concerns.

Passes toxicology screen with the condition that exposure scenario info be submitted to indicate minimum risk.

Passes Ecolox screen since data requirements are addressed by waiver.

Rita Kumar  
Rodger Gardner  
John Kaugh  
Driss Benmhend

F. Toghrul  
S. Cerrelli



JUN 8 1998

U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs

BIOTECHNOLOGIES FOR HORTICULTURE, INC.  
122 TOWER DRIVE  
BURR RIDGE, IL 60521

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 05/28/98. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.



May 27, 1998

Driss Benmhend  
Biochemicals Branch  
Biopesticides and Pollution Prevention Division (7511W)  
2800 Crystal Drive, Crystal Station Bldg. 1  
Arlington, VA 22207

WASHINGTON  
1101 17th Street, N.W.

Suite 500

Washington, D.C. 20036

Telephone 202 223 4392

Fax 202 872 0745

tsg@tsgusa.com

**RE: EthylBloc®; EPA File Symbol 71297-R  
EPA Letter dated April 30, 1998**

Dear Driss:

With this letter Technology Sciences Group, on behalf of Biotechnologies for Horticulture Inc., responds to the Agency's letter dated April 30, 1998 regarding the application for registration of EthylBloc®. Enclosed you will find the following information; each point corresponds with the points in your letter:

- 1) Three (3) copies of pages 29 - 42 of the Beuhler Sensitization Test (Toxicon Laboratories) which were missing.
- 2) Three (3) copies of a corrected Statement of Data Confidentiality Claims for the Hypersensitivity Incidents Report.
- 3) Three (3) copies of a study entitled "Physical and Chemical Properties of EthylBloc® - Part II." This study addresses the following physical and chemical data requirements detailed in your letter - listed as EPA Guideline (OPPTS Guideline): 63-2 (830.6302) Color; 63-3 (830.6303) Physical State; 63-4 (830.6304) Odor; 63-5 (830.7200) Melting Point; 63-14 (830.6314) Oxidizing or Reducing Action; 63-16 (830.6316) Explodability; 63-17 (830.6317) Storage Stability; and 63-20 (830.6320) Corrosion.

CALIFORNIA  
2700 Steuart Street Tower

One Market

San Francisco, CA 94105

Telephone 415 267 4119

Fax 415 267 4198

712 Fifth Street

Suite A

Davis, CA 95616

Telephone 530 757 1298

Fax 530 757 1299





Page 2  
May 27, 1998

WASHINGTON  
1101 17th Street, N.W.  
Suite 500  
Washington, D.C. 20036  
Telephone 202 223 4392  
Fax 202 872 0745  
tsg@tsgusa.com

- 4) For a greenhouse, non-food use site, non-target organism data is **conditionally required** for the following:

| <u>EPA Guideline No.</u> | <u>Data Requirement</u> |
|--------------------------|-------------------------|
| 154-6                    | Avian Oral              |
| 154-7                    | Avian Dietary           |
| 154-8                    | Freshwater Fish         |
| 154-9                    | Aquatic Invertebrate    |
| 154-11                   | Non-target Insect       |

For pesticides intended for indoor application only, these studies are required on a case-by-case basis depending upon use pattern, product volume and other pertinent factors. The Agency has requested a formal request for waivers of these studies. As such, with this letter we hereby request a waiver of the above listed data requirements, based on the following:

EthylBloc® is a powder which, when mixed with water or a buffer solution, releases a gas (1-Methylcyclopropene, MCP) that works to extend the life and usefulness of flowers and ornamental plants. The active ingredient inhibits the negative effects of ethylene which cause flower death, leaf or flower fall, and leaf yellowing. There are no reports of the active ingredient adversely effecting humans, animals or non-target organisms. The toxicity studies submitted to support registration indicate a toxicity category of IV for all routes of exposure with the exception of a toxicity category of III for eye irritation. EthylBloc® is intended for use as a gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers, shipping boxes, and / or enclosures specifically constructed for EthylBloc® use. In all cases, the enclosed areas are fairly gas tight to reduce leakage and achieve maximum effectiveness. As such, exposure to the environment would be limited, especially in light of the gaseous nature of the material. The product is **not** intended for use outdoors and it is **not** intended for use on food crops. When applied as a gas according to the proposed method of use, no direct environmental exposure to birds, fish, aquatic organisms or non-target insects is expected to occur.

CALIFORNIA  
2700 Stuart Street Tower  
One Market  
San Francisco, CA 94105  
Telephone 415 267 4119  
Fax 415 267 4198  
712 Fifth Street  
Suite A  
Davis, CA 95616  
Telephone 530 757 1298  
Fax 530 757 1299



Page 3  
May 27, 1998

*(How much gas  
of material is released per  
unit of volume?)*

WASHINGTON

1101 17th Street, N.W.

Suite 500

Washington, D.C. 20036

Telephone 202 223 4392

Fax 202 872 0745

tsg@tsgusa.com

*Exposure in  
terms of ppm*

CALIFORNIA

2700 Stuart Street Tower

One Market

San Francisco, CA 94105

Telephone 415 267 4119

Fax 415 267 4198

712 Fifth Street

Suite A

Davis, CA 95616

Telephone 530 757 1298

Fax 530 757 1299

*need to  
translate  
to smelling  
LC50*

5) Subchronic inhalation and inhalation developmental toxicity studies are **conditionally required** if pesticidal use may result in repeated inhalation exposure at a concentration which is likely to be toxic, or in the case of teratogenicity, if there is expected to be a significant exposure to female humans and the use requires a tolerance or an exemption or an issuance of a food additive regulation. For the case of EthylBloc®, none of the above apply. As such, with this letter we hereby request a waiver of any further inhalation data requirements based on the following rationale:

The product was tested in an Acute Inhalation Toxicity study, the results of which were an LC<sub>50</sub> of greater than 165 ppm, which was the highest attainable concentration. There were no adverse effects or mortality in the test. As previously stated, toxicity studies have indicated that EthylBloc® is not toxic and is rated as toxicity category IV or III for all routes of exposure. The results of the acute inhalation study do not trigger further inhalation testing of the product. There is not expected to be repeated exposure at potentially toxic concentrations, there is not expected to be significant exposure to female humans and the use does not require a tolerance, an exemption or a food additive regulation. Lastly, the use of respiratory protective equipment is recommended on the product label (the protective equipment listed is greater than that which is required for a product rated toxicity category IV for inhalation route of exposure).

In close, we have updated the proposed product label to include modified directions for use and revised precautionary statements (per current guidelines). Enclosed you will find five (5) copies of the label, noted with a last revision date of May 27, 1998. Please replace existing label drafts with this updated version. Should you have any questions or comments, please let us know.

Sincerely,

Amy Plato Roberts

Regulatory Consultant for Biotechnologies for Horticulture Inc.

(202) 828-8964



VOLUME 1 OF 2 OF SUBMISSION

TRANSMITTAL DOCUMENT

NAME AND ADDRESS OF SUBMITTER:

Biotechnologies for Horticulture, Inc.  
122 Tower Drive  
Burr Ridge, IL 60521

REGULATORY ACTION:

Submission of additional product chemistry data for EthylBloc® (EPA File Symbol 71297-R)

TRANSMITTAL DATE:

May 27, 1998

LIST OF SUBMITTED STUDIES:

| MRID<br>NUMBER | VOLUME<br>NUMBER | EPA STUDY TITLE                                             | GUIDELINE<br>NUMBER                                                                                                                                              |
|----------------|------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | 1 of 2           | (Transmittal Document)                                      |                                                                                                                                                                  |
| 44567601       | 2 of 2           | Physical and Chemical Properties of<br>EthylBloc® - Part II | OPPTS 830.6302, 830.6303,<br>830.6304, 830.7200, 830.<br>6314, 830.6316, 830.6317,<br>830.6320 (see title page for<br>corresponding EPA Series<br>63 references) |

COMPANY NAME:

Biotechnologies for Horticulture, Inc.

COMPANY OFFICIAL:

  
Amy Plato Roberts, Regulatory Agent

COMPANY CONTACT:

Amy Plato Roberts, Regulatory Agent  
Technology Sciences Group, Inc.  
1101 17th Street, N.W.  
Washington, DC 20036  
(202) 828-8964

Jess R. Martineau, Ph.D.  
Consultant  
Regulatory Affairs

10854 S. Green Ridge Drive  
Sandy, UT 84070

Phone (801) 572-4386  
Fax (801) 523-0377

EMail Jesmartino @ AOL.COM

March 28, 1998

Dr. Roy Sjoblad  
Biochemical Pesticides Branch  
Biopesticides and Pollution Prev. Div. (7511W)  
401 "M" Street, S.W.  
Washington, DC 20460

RE: MCP, EthylBloc™  
EPA Registration No. 71297-R

Dear Sir:

As of April 1, 1998, all correspondence regarding the subject registration application should be directed to:

Jim Daly  
BioTechnologies, for Horticulture  
122 Tower Drive  
Burr Ridge, IL 60521

Phone (630) 325-1888

Sincerely,

*Jess R. Martineau*

Jess R. Martineau, Ph.D.  
Regulatory Consultant

cc: Jim Daly, BioTechnologies for Horticulture  
Dr. George Staby, PRO



# BPPD PRAT ACTION CODING FORM

PM 90: Janet Andersen

REVIEWER: DIANE HUDSON

(ASSIGNED BY: 5-708200)

EPA REG./FILE SYMBOL 71297R

ACTION CODE                     

SUBMISSION BARCODE                     

Date on Application:                     

EPA Received Date                     

PM Received Date                     

Assigned in PRAT YES            NO           

Completed by: S. Diana Hudson Date                     

.....

## FINAL ACTION

Response Code                     

Response Date:   /  /  

MOS:            (1) Cite-All

           (4) Not Applicable

           (8) Selective

CRP: Yes            No           

Restricted Use: Yes            No           

Manufacturing Use: Yes            No           

Exclusive Use: Yes            No





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

1/13/98

*Biotechnology for Horticulture, Inc.*  
*120 Lower Drive*  
*Burn Ridge, IL 60521*

PRODUCT NAME: *h.thylbloc*  
COMPANY NAME: *Biotechnology for Hort., Inc.*  
OPP IDENTIFICATION NUMBER: *224973*  
EPA FILE SYMBOL: *71297-f*  
EPA RECEIPT DATE: *12/11/97*

SUBJECT: RECEIPT OF APPLICATION FOR A NEW REGISTRATION

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for a new registration and it has passed an administrative screen for completeness.

Please note that this is only a notification of receipt of your application. This is only the first step in the application process, and does NOT constitute approval.

If you have any questions please contact *Phil Hutton*,  
*Product Manager 92, at (703) 308-8260.*

Sincerely,

*J. A. Hutton*  
Front End Processing Staff  
Information Services Branch  
Information Resources & Services Division



N/FT 7/297-R L

Jess R. Martineau, Ph.D.  
Consultant  
Regulatory Affairs

10854 S. Green Ridge Drive  
Sandy, UT 84070

Phone (801) 572-4386  
Fax (801) 523-0377

EMail Jesmartino @ AOL.COM

November 22, 1997

US EPA - Office of Pesticide Programs (7505C)  
401 "M" Street, S.W.  
Washington, D.C. 20460

Subject: New active ingredient registration: 1-methylcyclopropene (MCP)

Accompanying this letter are the documents needed to apply for registration of the new plant growth regulator, 1-methylcyclopropene (MCP), trade name; EthylBloc™. Only an end use product is being registered at this time. The active ingredient is 0.43% of the formulation, with 99.57% inerts. The inerts have been cleared under 40 CFR for use on growing or harvested crops.

Attached is a copy of correspondence wherein the Biopesticide and Pollution Prevention Division agreed to review MCP. Also attached is a copy of the minutes from our January 16, 1997 meeting, wherein we reached an agreement regarding the data requirements for MCP for both non-food use, and food-use. This application is for non-food use.

Attached you should find the following in support of this registration:

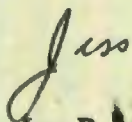
- . Registration Application (Form 8570-1)
- . Confidential Statement of Formula (basic) (Form 8570-4)
- . Confidential Statement of Formula (alternate) (Form 8570-4)
- . Certification with Respect to Citation of Data (Form 8570-29)
- . Labeling (5 copies)
- . Documentation of acceptance for review by BPPD.
- . Copy of minutes from meeting at EPA on January 16, 1997.
- . Transmittal Document
- . Supporting Data

The data have been generated by Horticulture for Biotechnologies, Inc. Storage stability and corrosion characteristics studies are underway, and will be submitted upon completion. We would request a conditional registration, pending the submission of these studies.

Horticulture for Biotechnologies, Inc has no other registration action pending. Being a small company, they need this registration approved as soon as possible, and would greatly appreciate an expedited review.

Should you have any questions, please call me at (801) 572-4386.

Sincerely,



Jess R. Martineau, Ph.D.

Consultant for Biotechnologies for Horticulture



## Transmittal Document

### To Support the Registration of 1-Methylcyclopropene (MCP)

1. Product name: EthylBloc™
2. EPA Registration Number:
3. Company Number:
4. Applicant's Name and Address: Biotechnologies for Horticulture, Inc.  
122 Tower Drive  
Burr Ridge, IL 60521
5. Name of Active Ingredient: 1-methylcyclopropene
6. Source of Data Satisfying Requirements: Complete data requirements generated and submitted by Biotechnologies for Horticulture, Inc.

#### 151A.10 Product identification and disclosure of ingredients

REJ(Φ1)

Doc. 1. Daly, J. (1997) Product Identity and Disclosure of Ingredients for 1-Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 59 p.

#### 151A.11 Manufacturing process

444647Φ1

Doc. 2. Daly, J. (1997) Manufacturing Method for 1-Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 20 p.

#### 151A.12 Discussion of the formation of unintentional ingredients

REJ(Φ2)

Doc. 3. Daly, J. (1997) Discussion of Unintentional Ingredients in EthylBloc: Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 34 p.

151A.13 Analysis of samples

444647Φ2

Doc. 4. Kourelis, B. (1997) Preliminary Analysis of Samples of Methylcyclopropene.(MCP).. Unpublished study prepared by Biotechnologies for Horticulture, Inc. 12 p.

151A.15 Certification of Ingredient Limits

RET(Φ3)

Doc. 5. Daly, J. (1997) Certification of Ingredient Limits for EthylBloc™. Unpublished study prepared by Biotechnologies for Horticulture, Inc. 4 p.

151A.16 Analytical Methods for certified limits

444647Φ3

Doc. 6. Daly, J. (1997) Analytical Methods for Certified Limits of Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 14 p.

151A.17 Physical and Chemical Properties

RET(Φ4)

Doc. 7. Bennick, J. (1997) Product Chemistry for Non-Combustible End-Use Solids. Final Report: Laboratory Study Number 3454-97. Unpublished study prepared by Stillmeadows, Inc. 12 p.

152A-10 Acute oral toxicity

444647Φ4

Doc.8. Pfeifer, R.W. (1996) Acute Oral Toxicity Study: Product Identification: MCP. Final Report: Laboratory Study Number 96G-2085. Unpublished study prepared by Toxikon Corporation. 30 p.

152A-11 Acute dermal toxicity

444647Φ5

Doc.9. Pfeifer, R.W. (1997) Acute Dermal Toxicity Study (Single Exposure): Product Identification: MCP. Final Report: Laboratory Study Number 96G-2086. Unpublished study prepared by Toxikon Corporation. 34 p.

152A-12 Acute Inhalation toxicity

444647Φ6

Doc. 10. Bennick, J. (1996) Acute Inhalation Toxicity Study in Rats. Final Report: Laboratory Study Number 333-97. Unpublished study prepared by Stillmeadows, Inc. 16 p.



152A-13 Primary eye irritation

44464707 Doc.11. Prezioso, J.A. (1996) Primary Eye Irritation Study: Product Identification: MCP. Final Report: Laboratory Study Number 96G-2089. Unpublished study prepared by Toxikon Corporation. 39 p.

152A-14 Primary dermal irritation

44464708 Doc.12. Pfeifer, R. W. (1996) Primary Dermal Irritation Study: Product Identification: MCP. Final Report: Laboratory Study Number 96G-2088. Unpublished study prepared by Toxikon Corporation. 33 p.

152A-15 Hypersensitivity

RET(05) Doc.13. Pfeifer, R. W. (1996) Beuhler Sensitization Test: Product Identification: MCP. Final Report: Laboratory Study Number 96G-2087. Unpublished study prepared by Toxikon Corporation. 42 p.

152A-16 Hypersensitivity incidents

RET(06) Doc.14. Daly, J. (1997) Hypersensitivity Incidents Report for Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 4 p.

152A-17 Studies to detect genotoxicity

44464709 Doc.15. Prezioso, J.A. (1996) Salmonella Typhimurium Revers Mutation Assay. Product Identification: MCP). Final Report: Laboratory Study Number 96G-2139. Unpublished study prepared by Toxikon Corp. 36 p.

44464710 Doc.16 . Cifone, M.A. (1997) Mutagenicity Test on MCP in the L5178Y TK ± Mouse Lymphoma Forward Mutation Assay. Final Report: Laboratory Study Number 18384-0-431. Unpublished study prepared by Covance . 29 p.

44464711 Doc.17. Ivett, J.L. (1997) Mutagenicity Test on MCP in an In Vitro Mouse Micronucleus Assay. Final Report: Laboratory Study Number 18384-0-455. Unpublished study prepared by Covance . 42 p.

## Transmittal Document

### To Support the Registration of 1-Methylcyclopropene (MCP)

1. Product name: EthylBloc™
2. EPA Registration Number:
3. Company Number:
4. Applicant's Name and Address: Biotechnologies for Horticulture, Inc.  
122 Tower Drive  
Burr Ridge, IL 60521
5. Name of Active Ingredient: 1-methylcyclopropene
6. Source of Data Satisfying Requirements: Complete data requirements generated and submitted by Biotechnologies for Horticulture, Inc.

#### 151A.10 Product identification and disclosure of ingredients

\_\_\_\_\_ Doc. 1. Daly, J. (1997) Product Identity and Disclosure of Ingredients for 1-Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 59 p.

#### 151A.11 Manufacturing process

\_\_\_\_\_ Doc. 2. Daly, J. (1997) Manufacturing Method for 1-Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 20 p.

#### 151A.12 Discussion of the formation of unintentional ingredients

\_\_\_\_\_ Doc. 3. Daly, J. (1997) Discussion of Unintentional Ingredients in EthylBloc: Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 34 p.



#### 152A-13 Primary eye irritation

Doc.11. Prezioso, J.A. (1996) Primary Eye Irritation Study: Product Identification: MCP. Final Report: Laboratory Study Number 96G-2089. Unpublished study prepared by Toxikon Corporation. 39 p.

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Doc.16 . Cifone, M.A. (1997) Mutagenicity Test on MCP in the L5178Y TK  $\pm$  Mouse Lymphoma Forward Mutation Assay. Final Report: Laboratory Study Number 18384-0-431. Unpublished study prepared by Covance . 29 p.

Doc.17. Ivett, J.L. (1997) Mutagenicity Test on MCP in an In Vitro Mouse Micronucleus Assay. Final Report: Laboratory Study Number 18384-0-455. Unpublished study prepared by Covance . 42 p.

151A.13 Analysis of samples

\_\_\_\_\_ Doc. 4. Kourelis, B. (1997) Preliminary Analysis of Samples of Methylcyclopropene (MCP).. Unpublished study prepared by Biotechnologies for Horticulture, Inc. 12 p.

151A.15 Certification of Ingredient Limits

\_\_\_\_\_ Doc. 5. Daly, J. (1997) Certification of Ingredient Limits for EthylBloc™. Unpublished study prepared by Biotechnologies for Horticulture, Inc. 4 p.

151A.16 Analytical Methods for certified limits

\_\_\_\_\_ Doc. 6. Daly, J. (1997) Analytical Methods for Certified Limits of Methylcyclopropene (MCP). Unpublished study prepared by Biotechnologies for Horticulture, Inc. 14 p.

151A.17 Physical and Chemical Properties

\_\_\_\_\_ Doc. 7. Bennick, J. (1997) Product Chemistry for Non-Combustible End-Use Solids. Final Report: Laboratory Study Number 3454-97. Unpublished study prepared by Stillmeadows, Inc. 12 p.

152A-10 Acute oral toxicity

\_\_\_\_\_ Doc.8. Pfeifer, R.W. (1996) Acute Oral Toxicity Study: Product Identification: MCP. Final Report: Laboratory Study Number 96G-2085. Unpublished study prepared by Toxikon Corporation. 30 p.

152A-11 Acute dermal toxicity

\_\_\_\_\_ Doc.9. Pfeifer, R.W. (1997) Acute Dermal Toxicity Study (Single Exposure): Product Identification: MCP. Final Report: Laboratory Study Number 96G-2086. Unpublished study prepared by Toxikon Corporation. 34 p.

152A-12 Acute Inhalation toxicity

\_\_\_\_\_ Doc. 10. Bennick, J. (1996) Acute Inhalation Toxicity Study in Rats. Final Report: Laboratory Study Number 333-97. Unpublished study prepared by Stillmeadows, Inc. 16 p.



## EthylBloc

EthylBloc is a powder that, when mixed with water or a buffering agent, releases a gas that can extend the life and usefulness of many fresh cut flowers, potted flowering, bedding, nursery and foliage plants. Crops are treated with this gas in enclosed areas such as rooms, coolers, greenhouses, truck trailers and shipping boxes/containers. This product is not intended for use outdoors or in other non enclosed areas.

|                                               |         |
|-----------------------------------------------|---------|
| Active Ingredient (1-Methylcyclopropene)..... | 0.43%   |
| Inert Ingredients.....                        | 99.57%  |
| Total.....                                    | 100.00% |

This product is not intended for use on food crops.

KEEP OUT OF REACH OF CHILDREN  
**CAUTION**

*See side panel for additional precautionary statements.*

MFG. By BioTechnologies for Horticulture, Inc.  
122 Tower Drive  
Burr Ridge, IL 60521  
Made in U.S.A.

For product information:  
Call (800) 323-3689

EPA Est. No. \_\_\_\_\_

EPA reg. No. \_\_\_\_\_

NET CONTENT: (25, 50, 100 or 200 gram units)

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Causes moderate eye irritation.  
Avoid contact with eyes or clothing.  
Wear eye protection and gloves when handling this product.  
Wash thoroughly with soap and water after handling.  
Avoid prolonged breathing of vapors.  
Do not take internally.

**STATEMENT OF PRACTICAL TREATMENT (FIRST AID)**

**IF IN EYES:** Flush eyes with plenty of water. Call a physician if irritation persists.

**DIRECTIONS FOR USE**

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Read entire label before using this product.

For complete use directions, see accompanying Tech Sheet.

**AGRICULTURAL USE REQUIREMENTS**

**Restricted re-entry** - Do not enter or allow worker entry into treated areas during the restricted-entry interval (*REI*) of four (4) hours. Treated area should be vented with outside air before reentry.

**STORAGE AND DISPOSAL**

**STORAGE**

Do not contaminate water, food, or feed by storage or disposal. Keep in closed container in a dry, cool place.



## UNUSED PRODUCT DISPOSAL

Any residues generated that cannot be used according to label instructions may be disposed of through any normal sewer/septic system.

## CONTAINER DISPOSAL

All container packaging may be disposed with normal trash.

## CLEANING APPLICATION/MIXING EQUIPMENT

Wear a chemical-resistant apron and gloves.

## TECH SHEET - COMPLETE DIRECTIONS FOR USE

EthylBloc® is sold as a powder that, when added to a Buffering Agent or water, then heated and/or agitated, releases a patented gas (*1-Methylcyclopropene, MCP*). When used properly, EthylBloc® can extend the life and usefulness of many fresh cut flowers, potted flowering, bedding, nursery and foliage plants. It works by inhibiting the negative effects of ethylene and thus prevents or reduces premature flower death, leaf and/or flower fall and leaf yellowing.

EthylBloc® was specifically designed to be used by all levels of the floral and nursery industries including growers, shippers, wholesalers, bouquet manufacturers, mail order houses and retailers (*florist, garden center, nursery and mass market outlets*). EthylBloc® is also very easy to use with almost no labor costs.

Some of the many flowers and plants that can often benefit from EthylBloc® treatment include:

Achillea, Aconitum, Agapanthus, Alchemilla, Allium, Alstroemeria, Alyssum, Aphelandra, Aquilegia, Asclepias, Astrantia, Asparagus Fern, Azalea, Begonia, Bouvardia, Brassia (*Schefflera*), Brodiaea (*Triteleia*), Calathea, Campanula, Carnation, Celosia, Centaurea, Chamaedorea, Chelone, Coleus, Cordyline, Cymbidium, Crocosmia (*Montbretia*), Daucus (*Queen-Annes-Lace*), Delphinium, Dendrobium, Dianthus, Dicentra, Dizygotheca, Doronicum, Echium, Eremurus, Eustoma (*Lisianthus*), Ficus, Freesia, Fuchsia, Geranium, Gladiolus, Godetia, Gypsophila, Hibiscus, Ilex (*Holly*), Impatiens, Ixia, Kalanchoe, Kniphofia, Lavatera, Lily, Lysimachia, Miniature Carnation, Monkshood, Pelargonium, Petunia, Philodendron, Phlox, Physostegia, Poinsettia, Rademachera, Rose, Rudbeckia, Salvia, Saponaria, Scabiosa, Silene, Snapdragon, Solidaster, Stock, Streptocarpus, Sweet William, Trachelium, Trollius, Veronica, Wax Flower, and Zygocactus.

Crops must be exposed to this gas in enclosed areas such as greenhouses, rooms, coolers, shipping boxes or trailers. These enclosed areas should be fairly gas tight as excessive leakage will reduce EthylBloc® effectiveness. This product is not intended for use outdoors or in other non-enclosed areas.

EthylBloc® is more effective when crops are exposed to this gas for at least four hours under warm temperature conditions (55° to 75° F, 13° to 24° C). Higher dosages and longer treatment times are required for crops held under lower temperatures (*below 55° F, 13° C*) but the effectiveness should remain the same.

EthylBloc® can be used just prior to harvest, immediately after harvest, just prior to shipment, upon arrival from the supplier, and/or just prior to sale. To realize maximum benefits, all of the crops listed above should be treated regardless if they might have been already treated with EthylBloc® or with another anti-ethylene product at an earlier point in the distribution chain.

Shipments which have already been treated with EthylBloc® do not have to be retreated. However, as noted above, retreating is not harmful and can even be beneficial. Examples of some species that would likely benefit from additional applications include those with more than one flower per stem (*i.e. snapdragons, delphiniums, miniature carnations and alstroemeria*) and flowers at different stages of development on the same plant (*i.e. geraniums, impatiens, and azaleas*).

EthylBloc® comes with a scoop for easy measurement along with the proper Buffering (mixing) Agent. The Buffering Agent is used to facilitate MCP gas release from the white powdered carrier. It contains 0.75% potassium hydroxide and 0.75% sodium hydroxide after the proper amount of water is added. Users can substitute tap water for the Buffering Agent but the MCP gas release will likely not be as efficient. Using warm water and/or continuous agitation after mixing is best, if the Buffering Agent is not used. Contact the manufacturer for additional mixing tips, if water, not Buffering Agent, is used. Refer to the information presented below for selecting the right number of EthylBloc® scoops and Buffering Agent volume for your application.

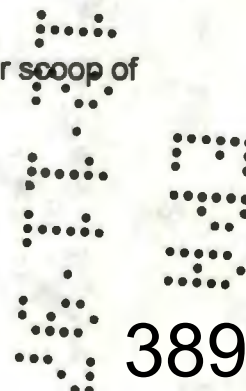


## APPLICATION IN GREENHOUSES PRIOR TO HARVEST

Fresh cut flowers and bedding, potted flowering, nursery and foliage plants can be treated in the greenhouse just prior to being harvested.

*To treat with EthylBloc®:*

1. The greenhouse must be tightly constructed. Plastic covered houses (*especially double poly*) are generally tighter than fiberglass or glass covered ones.
  2. Sections of greenhouses can be enclosed with plastic to make the treatment area smaller as long as it is sealed properly to prevent the gas from escaping.
  3. Make sure all greenhouse vents are closed. Night treatment is recommended mainly because vent closing is more realistic and treatment times can be longer.
  4. Any internal air circulation system (*that does not bring in outside air*) should remain on during treatment to help distribute the gas.
  5. The amount of EthylBloc® required depends on the volume of the greenhouse, treatment temperature, and treatment time.
  6. To determine the approximate greenhouse volume, multiply the greenhouse width x length x  $\frac{1}{2}$  of the height measured at the ridge/peak. For example, if a greenhouse is 25 feet wide x 100 feet long x 10 feet high, the approximate volume equals  $25 \times 100 \times 10/2 = 12,500$  cubic feet.
  7. The above described calculations can also be done in meters, as dosages are presented both in per cubic foot and per cubic meter.
  8. All greenhouse treatments should be done at temperatures greater than 55° F, 13° C.
  9. For treatment times from four to eight hours, the correct EthylBloc® dosage is one scoop per 100 cubic feet or one scoop per 3.0 cubic meters.
- Note: One level scoop equals about 1.5 grams*
10. For treatment times from 12 to 16 hours, the correct EthylBloc® dosage is reduced to one scoop per 200 cubic feet or one scoop per 6.0 cubic meters.
  11. The correct amount of Buffering Agent to use is one ounce (*about 30 ml*) per scoop of EthylBloc®.



12. The mixing container should be made out of plastic and be large enough to hold the EthylBloc® and Buffering Agent. A plastic pail works well for larger applications while a plastic bowl or similar container for smaller applications.
13. Please refer to *Tables One, Two and Three* for examples of recommended EthylBloc® dosages based on room size, treatment temperature and treatment time.
14. To mix:
  - a. First add the proper amount of EthylBloc® to the mixing container.
  - b. Then add the proper amount of Buffering Agent, making sure that all of the EthylBloc® powder is covered. Warm water is better than cold water.
  - c. Briefly stir the mixture for about 5 to 10 seconds and then leave the treatment area, making sure the area is properly sealed behind you. Providing for continuous agitation or heat is best.
15. Disposal of the remaining mixing solution can be made in normal septic or sewer systems.

***Restricted re-entry*** - Do not enter or allow worker entry into treated greenhouses during the restricted-entry interval (REI) of four hours. Treated greenhouses should be vented with outside air before re-entry.



## APPLICATION IN HOLDING/STORAGE ROOMS, COOLERS, TRUCK TRAILERS AND OTHER ENCLOSED AREAS

Non-boxed crops being held in enclosed areas can be easily treated with EthylBloc®. For example, sleeved potted plants and cut flowers (*held dry or in solution*) that are not boxed can be treated. Boxed plants and cut flowers with the lids and/or precooling vents completely open can also be treated as long as the box openings are directly exposed to the surrounding atmosphere and thus the EthylBloc® gas. Bedding or potted plants on movable racks are easily treated.

Examples of typical areas that could be used for treating crops with EthylBloc® include:

- Retail florist coolers including walk-in, storage and/or walk-in/storage combinations.
- Wholesale florist coolers.
- Delivery trucks or vans, regardless of their size/volume.
- Truck trailers.
- Inter-modal containers.
- Any room in a building that could be isolated, sealed and aerated/vented after treatment.
- Boxed crops if the boxes were enclosed in plastic such as being shrink wrapped.

*Note: Some of the treatment area examples presented above may require plastic liners, tape and/or other products and procedures to make them more gas tight.*

*To treat with EthylBloc®:*

1. Measure the size of the room/cooler/trailer (*length, width, and height*) in feet or meters.
2. Multiply these three numbers together to obtain the volume of the room in cubic feet or cubic meters.
3. Refer to *Tables One and Two* for the EthylBloc® rates if the treatment room and products are 55° F (13° C) or higher.
4. If the treatment and/or product temperature is below 55° F (13° C), the ~~correct~~ EthylBloc® dosage is three scoops per 100 cubic feet and three scoops per 3.0 cubic meters (*see Table Three*).

5.

5. The mixing container should be made out of plastic and be large enough to hold the EthylBloc® and Buffering Agent. A plastic pail works well for larger applications while a plastic bowl or similar container for smaller applications.

6. Please refer to all three *Tables* for examples of the recommended rates based on treatment temperatures and time.

7. To mix:

a. First add the proper amount of EthylBloc® to the mixing container.

b. Then add the proper amount of Buffering Agent or water, making sure that all of the EthylBloc® powder is covered. Warm water is better than cold water.

c. Briefly stir the mixture for about 5 to 10 seconds and then leave the treatment area, making sure the area is properly sealed behind you. Providing for continuous agitation or heat is best.

8. Disposal of the remaining Buffering Agent can be made in normal septic or sewer systems.

*Restricted re-entry* - Do not enter or allow worker entry into treated greenhouses during the restricted-entry interval (*REI*) of four hours. Treated greenhouses should be vented with outside air before reentry.



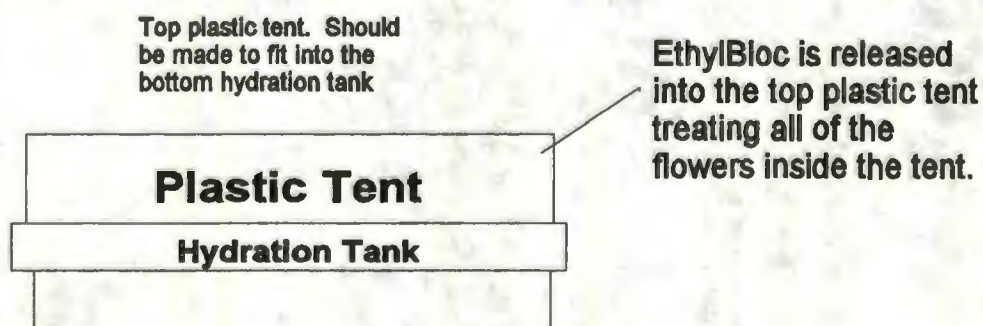
## APPLICATION IN AREAS SPECIFICALLY BUILT FOR ETHYLBLOC® TREATMENT

*General EthylBloc® Treatment Chamber.* It might be appropriate to construct an area to be used solely for EthylBloc® treatment. By doing so one can maximize the EthylBloc effectiveness and reduce costs by requiring less EthylBloc® to treat a given number of crop units.

While this treatment area could be built using a number of gas impermeable materials, 4.0 to 6.0 mil polyethylene should work well. Just make sure the unit is sealed properly.

One way to help ensure a good seal where the plastic comes in contact with the floor is to use water. Namely, the base (*plastic*) of the treatment unit is submerged in a trough of water a few inches deep thus making a good seal where gas cannot escape.

To use such a treatment area, follow the same directions presented above for greenhouses and other enclosed areas making sure you adjust the rates based on crop and room temperatures. Constructing such specific EthylBloc® treatment areas has proven to be an effective way of using EthylBloc®.



Bottom tank is about 15-20cm high and full of solution. The flowers sit in this solution and hydrate while being treated with MCP

*Cut flower: Hydration/EthylBloc® Treatment Chamber.* The top of the chamber can be made of 4.0 to 6.0 mil polyethylene and a wooden frame, a single plastic piece that can fit into the bottom hydration tank, or something similar. The bottom tank can be any size tub that is capable of holding solutions. See drawing above.

Place the flowers into the bottom tank in bunches or buckets. Place the top plastic tent over the bottom holding tank. The tent's bottom edges must be able to be submerged into the solution to the bottom of the tank to insure a seal. Lift an end of the tent up and place the bowl or bucket containing EthylBloc® powder into the chamber. Place the Buffering Agent into the bowl or bucket, totally covering the powder. The contents in the bowl/bucket must remain separate from the solution in the tank throughout the treatment. Immediately seal the tent by submerging the walls of the tent in the solution to the bottom of the tank. Follow EthylBloc® use directions already presented.



**Table One:** EthylBloc® and Buffering Agent rates based on treatment temperatures being at least 55° F (13° C) and treatment time be a minimum of four and up to eight hours in various room sizes. Rates not given can be calculated by combining treatment room sizes.

| TREATMENT ROOM SIZE |              | ETHYLBLOC® |       | Buffering Agent |             |
|---------------------|--------------|------------|-------|-----------------|-------------|
| cubic feet          | cubic meters | scoops     | grams | ounces          | milliliters |
| 100                 | 3            | 1          | 1.5   | 1               | 30          |
| 500                 | 15           | 5          | 7.5   | 5               | 150         |
| 1000                | 30           | 10         | 15.0  | 10              | 300         |
| 2500                | 75           | 25         | 37.5  | 25              | 750         |
| 5000                | 150          | 50         | 75.0  | 50              | 1500        |
| 10000               | 300          | 100        | 150.0 | 100             | 3000        |

*Note: A minimum four hour exposure is required. Overnight exposure (eight hours) is even better.*

**Table Two:** EthylBloc® and Buffering Agent rates based on treatment temperatures being at least 55° F (13° C) and treatment time be a minimum of 12 to 16 hours in various room sizes. Rates not given can be calculated by combining treatment room sizes.

| TREATMENT ROOM SIZE |              | ETHYLBLOC® |       | Buffering Agent |             |
|---------------------|--------------|------------|-------|-----------------|-------------|
| cubic feet          | cubic meters | scoops     | grams | ounces          | milliliters |
| 200                 | 6            | 1          | 1.5   | 1               | 30          |
| 1000                | 30           | 5          | 7.5   | 5               | 150         |
| 2000                | 60           | 10         | 15.0  | 10              | 300         |
| 5000                | 150          | 25         | 37.5  | 25              | 750         |
| 10000               | 300          | 50         | 75.0  | 50              | 1500        |
| 20000               | 600          | 100        | 150.0 | 100             | 3000        |

*Note: A minimum 12 to 16 hour exposure is required.*



**Table Three:** EthylBloc® and Buffering Agent rates based on treatment temperatures being between 35° and 55° F (3° and 13° C) and treatment time be a minimum of 10 hours in various room sizes. Rates not given can be calculated by combining treatment room sizes.

| TREATMENT ROOM SIZE |              | ETHYLBLOC® |       | Buffering Agent |             |
|---------------------|--------------|------------|-------|-----------------|-------------|
| cubic feet          | cubic meters | scoops     | grams | ounces          | milliliters |
| 100                 | 3            | 1.5        | 2.3   | 1.5             | 45          |
| 500                 | 15           | 7.5        | 11.3  | 7.5             | 225         |
| 1000                | 30           | 15.0       | 22.5  | 15.0            | 450         |
| 2500                | 75           | 37.5       | 56.3  | 37.5            | 1125        |
| 5000                | 150          | 75.0       | 112.5 | 75.0            | 2250        |
| 10000               | 300          | 150.0      | 225.0 | 150.0           | 4500        |

*\* Note: a minimum 10 hour exposure period is required for plants and flowers being held at 55° F (13° C) or lower. Longer exposures are even better.*

**Contact BioTechnologies for Horticulture if questions arise at**  
**(800) 323-3689**  
**(630) 325-1888**



# (EthylBloc Powder Outer Carton Label)



# EthylBloc

This product is not intended for use on food crops.

Este producto no debe utilizarse en cultivos destinados a fines de alimentación.

Active Ingredient (1-Methylcyclopropene) . . . . . 0.43%  
Inert Ingredients . . . . . 99.57%  
Total . . . . . 100.00%

Ingrediente activo (1-Metilciclopropeno) . . . . . 0,43%  
Ingredientes inertes. . . . . 99,57%  
Total . . . . . 100%

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**MANTENGA FUERA DEL ALCANCE DE LOS NIÑOS  
CUIDADO**

Causes moderate eye irritation.  
Avoid contact with eyes or clothing.  
Wear eye protection and gloves when handling this product.  
Wash thoroughly with soap and water after handling.  
Avoid prolonged breathing of vapors.  
Do not take internally.

Causa una irritación moderada a los ojos.  
Evite el contacto con los ojos o la ropa.  
Protéjase la vista y use guantes cuando manipule este producto.  
Lávese totalmente con agua y jabón después de la manipulación.  
Evite respirar los vapores por un tiempo prolongado.  
No ingiera el producto.

#### STATEMENT OF PRACTICAL TREATMENT (FIRST AID)

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

#### DECLARACION DE TRATAMIENTO PRACTICO (PRIMEROS AUXILIOS)

SI PENETRA EN LOS OJOS: Lávese los ojos con abundante agua. Llame a un médico si persiste la irritación.



MFG. By  
**BioTechnologies  
for Horticulture, Inc.**

122 Tower Drive  
Burr Ridge, IL 60521  
Mfd. in U.S.A.

For product information:  
Call (630) 325-1888

(NET CONTENTS: 100 grams)



FABR. por  
**BioTechnologies  
for Horticulture, Inc.**

122 Tower Drive  
Burr Ridge, IL 60521  
Hecho en EE.UU.

Para información del producto:  
Llamar al (630) 325-1888

(CONTENIDO NETO: 100 g)

10/31/97  
396



January 27, 1997

Dr. Robert Torla  
Office of Pesticide Programs  
U.S. EPA (H7503W)  
Washington, DC 20460

Via Fax (703) 308-7026

Dear Dr. Torla,

Thank you, Cheryl, Tom and Fresteh for an excellent meeting. As requested, here are minutes from the meeting as I composed them.

Date of Meeting: January 16, 1997

Subject: Registration of MCP

Present: Bob Torla, Cheryl Reilly, Fresteh Toghril, Tom McClintock,  
George Staby, Richard Basel, Jess Martineau

George gave a brief summary of MCP. The mode of action is to inhibit ethylene. The proposed use sites are ornamentals (cut flowers) and stored fruits and vegetables. Only an end use will be registered. Two separate registrations will be sought; one for ornamentals and one for food crops. The formulation is a powder which produces a gas when it comes in contact with water. The carrier is [REDACTED]. MCP has previously been reviewed and the decision made that it would be reviewed by BPPD with reduced requirements.

George illustrated the very low dose rates (6 grams) of MCP required to treat a complete commercial container (3,500 cubic feet). When used at the recommended rate, the concentration of MCP is below the limit of detection.

Richard discussed the analytical methods, with input from Fresteh. Two analytical methods are requested. George discussed the specificity of the receptor sites in plant material. Fresteh pointed out the value of showing that animals do not have receptor sites for MCP. Such evidence would be useful in justifying waivers for subchronic studies and also to support a petition for the exemption from the requirement of a residue tolerance.

Cheryl discussed the FQPA, and provided draft copies of the form to be used. George asked if she could share a completed example, to which she agreed.

Jess discussed the results of the acute toxicity studies completed to date, to wit:

- Acute oral toxicity - limit
- Acute dermal toxicity - limit
- Primary eye irritation - Cat. III
- Primary skin irritation - non-irritant



Dermal sensitization - non-sensitizer  
Ames - negative

Further requirements were discussed. The need for an acute inhalation study was pointed out. Fresteh recommended a whole animal study, using the gas form, at the highest concentration achievable. Richard pointed out that the gas becomes an explosive hazard at high concentrations.

Toxicology: In addition to the studies already conducted, 2 genotox studies will be required, in addition to the acute inhalation. Waivers will be requested for subchronic studies.

Product Chemistry: Studies to determine color, physical state, and odor will not be conducted per se, but these attributes mentioned elsewhere. Density, pH, storage stability and corrosion characteristics will be reported for the end product. Waivers will be requested for vapor pressure and octanol/water partitioning coefficient.

The analytical confirmation of MCP during processing, in the final products, and use were discussed. It was agreed that gas chromatography/flame ionization detection will be used to analyze samples. A backup, secondary method of gas chromatography/chemical ionization mass spectroscopy will also be used. The limit of detection will be shown by running samples at various concentrations. The correlation between the concentration at different concentrations will confirm good linearity of the detection method over a wide range of concentrations.

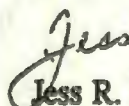
The methods will also be used to measure the concentration of the standards used for GLP studies. Proton Nuclear Resonance Spectroscopy along with GC/MS will be used to confirm the chemical identity of the MCP produced as standards.

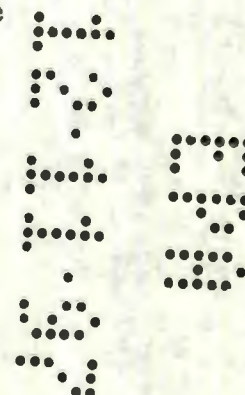
Review time was discuss, and Bob indicated that less than a year is possible, but "no promises". Ornamental use approval would be quicker than for food use, due to fewer data requirements.

Re-entry requirements were discussed. A 4 or a 6 hour re-entry may be possible, given low/no toxicity, low dose rates, and if it can be shown that animals/humans have no receptor sites.

Again, thank you for taking the time to meet with us. If I missed anything in the minutes, please let me know.

Sincerely,

  
Jess R. Martineau  
cc: George Staby







UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

April 17, 1997

Jess R. Martineau, Ph.D.  
10854 S. Green Ridge Drive  
Sandy, UT 84070

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

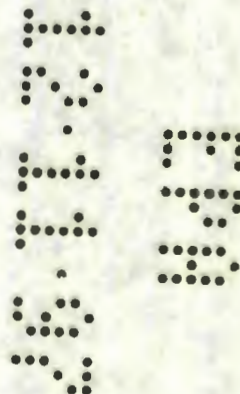
Dear Dr. Martineau;

The attached printout from our biochemical classification database should serve to show the decision process for MCP. The BPPD Division Director, Janet Andersen, has signed off on reviewing MCP in the Biopesticide and Pollution Prevention Division.

Sincerely,

A handwritten signature in dark ink, appearing to read "W.R. Schneider".

William R. Schneider, Ph.D., Chair  
Biochemical Classification Committee  
Biopesticide & Pollution Prevention Division (7501 W)





Product Reviewer: William Schneider Date of initial draft review 07/29/96 10:38:52 AM  
Date reviewed by the Classification Committee 12/03/96

Product Name/ Active ingredients: 1-methylcyclopropane.

Company: Perishables Research Organization Address: PO Box 1552 Healdsburg, CA 95448

Company contact: George L. Staby, Ph.D., President  
Phone: 707-433-1982 FAX number: 707-433-1984 eMail: stabygeo@aol.com

Company Representative: Address:  
Phone: FAX number: eMail:

Use Patterns: This is a gas that is used for treatment of fruits and vegetables to delay ripening. It temporarily blocks the formation of ethylene. One short treatment will last for 3 weeks.

The activity of this product indicates that it is a Plant Growth Regulator

Natural Occurrence: It will be synthesized so it will have to be structurally similar and functionally identical to a naturally-occurring chemical. The company cites various literature that states that cyclopropane and cyclopropene acids are produced by the plant family Malvaceae, ".... certain fatty acids contained a cyclopropene system ...", cyclopropane fatty acids are found in some microbial pathways, chrysanthemic acid (from pyrethrine) has a cyclopropane ring, and ethylene biosynthesis involves a cyclopropane derivative, 1-amino-2-methyl-cyclopropane-1-carboxylic acid. The two references cited to support cyclopropene acids occurring in plants reported investigations of the synthetic pathways of sterculic acid (found in Sterculia foetida - Indian almond) and malvalic acid (long chain fatty acids containing a cyclopropene ring). The ring structure was theorized to be formed by activity on the long chain and not involving a separate ring formation process. Note that we have no references for the natural occurrence of 1-MCP itself - (as a gas it would probably be a very transient, reactive, intermediate).

Mode of Action: The mode of action is growth regulation and is a non-toxic mode of action.

Decision: This gas has not been shown to occur naturally. The committee recognizes that, as a gas, it is difficult to determine if this is a naturally-occurring substance. However, it can not be proved to fit the biochemical pesticide definition. The use of MCP as a growth regulator does fit the other characteristics of a biochemical pesticide, e.g. growth regulation, low use rates (it is effective in ppb amounts), non-persistence and non-toxic mode of action. An analysis of MCP was performed by the OPPT Structure Activity Team. The analysis suggested that the tiered system data set used for biochemical pesticides would be appropriate for risk assessment of MCP. The committee agreed that MCP would be eligible for review using a reduced data set similar to that used for biochemical pesticides and could be considered for review by BPPD.

Committee Classification: Not a Biochemical but eligible for reduced data set





United States  
Environmental Protection Agency  
Washington, DC 20460

☒ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number  
**224973**

**Application for Pesticide - Section I**

|                                                                                                                                                                                                             |                                                                                                                                                                                      |                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br><b>Alt 100 71297-R</b>                                                                                                                                                         | 2. EPA Product Manager<br><b>Robert Torda</b>                                                                                                                                        | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br><b>Ethyl Blox</b>                                                                                                                                                              | PM#<br><b>92</b>                                                                                                                                                                     |                                                                                                            |
| 5. Name and Address of Applicant (Include ZIP Code)<br><b>Biotechnologies for Horticulture, Inc.<br/>120 Town Drive<br/>Barr Ridge, IL 60521</b><br><input type="checkbox"/> Check if this is a new address | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                            |

**Section - II**

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Amendment - Explain below.                 | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

**Section - III**

|                                                                                                                                                                                |                                                                                          |                                                                                                   |                                      |                                                                                                                                                                                                     |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1. Material This Product Will Be Packaged In:                                                                                                                                  |                                                                                          |                                                                                                   |                                      | 2. Type of Container                                                                                                                                                                                |                   |
| Child-Resistant Packaging<br><input type="checkbox"/> Yes*<br><input checked="" type="checkbox"/> No                                                                           | Unit Packaging<br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No |                                      | <input checked="" type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |                   |
| * Certification must be submitted                                                                                                                                              |                                                                                          | If "Yes" Unit Packaging wgt.                                                                      | No. per container                    | If "Yes" Package wgt                                                                                                                                                                                | No. per container |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input checked="" type="checkbox"/> Container                                                        |                                                                                          | 4. Size(s) Retail Container<br><b>10, 25, 50, 100, 200 grams</b>                                  |                                      | 5. Location of Label Directions<br><input checked="" type="checkbox"/> On Label<br><input type="checkbox"/> On Labeling accompanying product                                                        |                   |
| 6. Manner in Which Label is Affixed to Product<br><input checked="" type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                                          |                                                                                                   | <input type="checkbox"/> Other _____ |                                                                                                                                                                                                     |                   |

**Section - IV**

|                                                                                                                                                                                                                                                                             |  |                                   |  |                                                            |                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------|--|------------------------------------------------------------|--------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                               |  |                                   |  |                                                            |                                            |
| Name<br><b>Jess R. Martineau</b>                                                                                                                                                                                                                                            |  | Title<br><b>Consultant</b>        |  | Telephone No. (Include Area Code)<br><b>(801) 583-2438</b> |                                            |
| Certification<br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |  |                                   |  |                                                            | 6. Date Application Received (Stamped)<br> |
| 2. Signature<br>                                                                                                                                                                                                                                                            |  | 3. Title<br><b>Vice President</b> |  |                                                            |                                            |
| 4. Typed Name<br><b>Jim Daly</b>                                                                                                                                                                                                                                            |  | 5. Date<br><b>9/25/97</b>         |  |                                                            |                                            |



## PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

**PAPERWORK REDUCTION ACT NOTICE:** Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

**INSTRUCTIONS:** This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). (If not exempted by 40 CFR 152.81 (b) (4));
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

**Submission of Labeling** - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

**Submission of Data** - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

**SPECIFIC INSTRUCTIONS:** Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

**Block A** - Check the appropriate action for which you are submitting this form.

**SECTION I** - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

**SECTION II** - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

**SECTION III** (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types.  
Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.





United States  
Environmental Protection Agency  
Washington, DC 20460

☒ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

224973

## Application for Pesticide - Section I

|                                                                                                                                                   |                                                                                                                                                                                      |                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1. Company/Product Number<br><i>71297-R</i>                                                                                                       | 2. EPA Product Manager<br><i>Robert T. ...</i>                                                                                                                                       | 3. Proposed Classification<br><input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted |
| 4. Company/Product (Name)<br><i>Ethyl Blue</i>                                                                                                    | PM#<br><i>9.2</i>                                                                                                                                                                    |                                                                                                            |
| 5. Name and Address of Applicant (Include ZIP Code)<br><i>Biotechnologies for Horticulture, Inc.<br/>130 Tower Drive<br/>Burr Ridge, IL 60521</i> | 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to:<br>EPA Reg. No. _____<br>Product Name _____ |                                                                                                            |
| <input type="checkbox"/> Check if this is a new address                                                                                           |                                                                                                                                                                                      |                                                                                                            |

## Section - II

|                                                                                |                                                                                        |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Amendment - Explain below.                 | <input type="checkbox"/> Final printed labels in response to Agency letter dated _____ |
| <input type="checkbox"/> Resubmission in response to Agency letter dated _____ | <input type="checkbox"/> "Me Too" Application.                                         |
| <input type="checkbox"/> Notification - Explain below.                         | <input type="checkbox"/> Other - Explain below.                                        |

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

## Section - III

|                                                                                                                                                                                |                                                                                          |                                                                                                   |                                                     |                                                                                                                                                                                                     |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Material This Product Will Be Packaged In:                                                                                                                                  |                                                                                          |                                                                                                   |                                                     | 2. Type of Container                                                                                                                                                                                |  |
| Child-Resistant Packaging<br><input checked="" type="checkbox"/> Yes*<br><input type="checkbox"/> No                                                                           | Unit Packaging<br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No | Water Soluble Packaging<br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No |                                                     | <input checked="" type="checkbox"/> Metal<br><input type="checkbox"/> Plastic<br><input type="checkbox"/> Glass<br><input type="checkbox"/> Paper<br><input type="checkbox"/> Other (Specify) _____ |  |
| * Certification must be submitted                                                                                                                                              |                                                                                          | If "Yes" Unit Packaging wgt. _____ No. per container _____                                        | If "Yes" Package wgt. _____ No. per container _____ |                                                                                                                                                                                                     |  |
| 3. Location of Net Contents Information<br><input type="checkbox"/> Label <input checked="" type="checkbox"/> Container                                                        |                                                                                          | 4. Size(s) Retail Container<br><i>10, 25, 50, 100, 200 grams</i>                                  |                                                     | 5. Location of Label Directions<br><input type="checkbox"/> On Label<br><input checked="" type="checkbox"/> On Labeling accompanying product                                                        |  |
| 6. Manner in Which Label is Affixed to Product<br><input checked="" type="checkbox"/> Lithograph<br><input type="checkbox"/> Paper glued<br><input type="checkbox"/> Stenciled |                                                                                          |                                                                                                   | <input type="checkbox"/> Other _____                |                                                                                                                                                                                                     |  |

## Section - IV

|                                                                                                                                                                                                                                                                             |  |                                                            |                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------|--------------------------------------------|
| 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)                                                                                                                               |  |                                                            |                                            |
| Name<br><i>Jess R. Martineau</i>                                                                                                                                                                                                                                            |  | Title<br><i>Consultant</i>                                 |                                            |
|                                                                                                                                                                                                                                                                             |  | Telephone No. (Include Area Code)<br><i>(801) 570-4376</i> |                                            |
| Certification<br>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. |  |                                                            | 6. Date Application Received (Stamped)<br> |
| 2. Signature<br><i>[Signature]</i>                                                                                                                                                                                                                                          |  | 3. Title<br><i>Vice President</i>                          |                                            |
| 4. Typed Name<br><i>Jess R. Martineau</i>                                                                                                                                                                                                                                   |  | 5. Date<br><i>8/25/97</i>                                  |                                            |



## PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

**PAPERWORK REDUCTION ACT NOTICE:** Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

**INSTRUCTIONS:** This form is to be used for all applications for new registration, end use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

**Submission of Labeling** - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels must be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

**Submission of Data** - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

**SPECIFIC INSTRUCTIONS:** Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

**Block A** - Check the appropriate action for which you are submitting this form.

**SECTION I** - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

**SECTION II** - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

**SECTION III** (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types.  
Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

**SECTION IV** (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.





United States  
Environmental Protection Agency  
Washington, DC 20460

Form Approved  
OMB No. 2070-0060  
Approval Expires 02-28-95

Certification with Respect to Citation of Data

Applicants Name and Address

Biotechnologies for Horticulture, Inc.  
120 Tower Drive  
Burr Ridge, IL 60521

EPA File Symbol/Registration Number

Product Name

Methylcyclopropene (MCP)

Date of Application

October, 1997

**NOTE:** If your product is a 100% repackaging of another EPA-registered product that you purchase, and is labeled for the same uses, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

1. This application is supported by all data submitted or cited in the application. In addition, if cite-all options are indicated, this application is supported by all data in the Agency's files that concern the properties or effects of this product that is identical or substantially similar and that is one of the types of data that would be required to be submitted if this application sought the initial registration of a product of identical or similar composition and intended uses under the data requirements in effect on the date of approval of this application. (Check the appropriate boxes, in items 2 and 3, or 4 below that pertain to your application.)

2. I certify that, for each study cited in support of this application for registration that is an exclusive use study.

☒ I am the original submitter\*; or

☐ I have obtained the written permission of the original submitter for \_\_\_\_\_, which is  
(insert name of chemical)  
(for multiple chemicals link the companies who are original data submitters  
(insert names of companies)  
with the appropriate chemical name) to cite that study\*

3. I certify that, for each study cited in support of this application for registration that is not an exclusive use study;

a. ☒ I am the original data submitter\*; or

☐ I have obtained the written permission of the original data submitter for \_\_\_\_\_, which is  
(insert name of chemical)  
(for multiple chemicals link the companies who are original data submitters  
(insert names of companies)  
with the appropriate chemical name) to cite that study\*; or

b. ☐ I have notified in writing the companies \_\_\_\_\_ for \_\_\_\_\_ that  
(insert names of companies) (insert name of chemical)

have submitted data I have cited to support this application and have offered to: (a) Pay compensation for those data in accordance with section 3(c)(1)(F) and 3(c)(2)(D) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA); and (b) Commence negotiations to determine which data are subject to the compensation requirement of FIFRA and the amount and terms of compensation due, if any. The companies I have notified are:

Companies \_\_\_\_\_ for \_\_\_\_\_ (for multiple  
(insert names of companies) (insert name of chemical)  
chemicals link the companies who are original data submitters with the appropriate chemical name)  
listed on the Pesticide Data Submitters List for all active ingredients contained in my product  
(cite-all method or cite-all option under Selective Method\*). (Also, sign the General Offer  
Statement below.)

Companies \_\_\_\_\_ for \_\_\_\_\_ (for multiple  
(insert names of companies) (insert name of chemical)  
chemicals link the companies who are original data submitters with the appropriate chemical name)  
that have submitted the studies which I have cited (Selective method\*).

4. ☐ I certify that for each study cited in support of this application I am not required to offer data compensation or obtain written permission because all time periods for exclusive use and data compensation have expired.

\* A Data Matrix identifying these studies is attached. (Note: a Data Matrix is not required under the cite-all method).

Signature ☒

Name and Title

President

Date

9/25/97

General Offer to Pay: I hereby offer and agree to pay compensation to other persons, with regard to the approval of this application, to the extent required.

Signature ☒

Name and Title

President

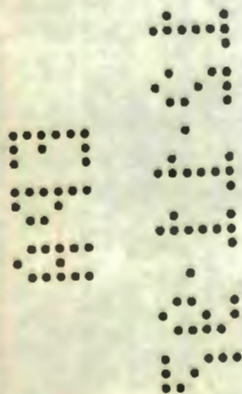
Date

9/25/97



#### Paperwork Reduction Act Notice

The public reporting burden for this collection of information is estimated to average 2.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining needed data, and completing and reviewing this application form. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 401 M Street, S. W., Washington, DC 20460; and to Office of Management and Budget, Paperwork Reduction Project (2070-0055), Washington, DC 20503, marked "Attention Desk Officer for EPA."







Called Bob Larkin

2/5/04 - left voice mail  
told him this CSF (latest  
of record) - had wrong  
prod. name! EthylBloc  
is correct name + needs  
anndet. SKR



